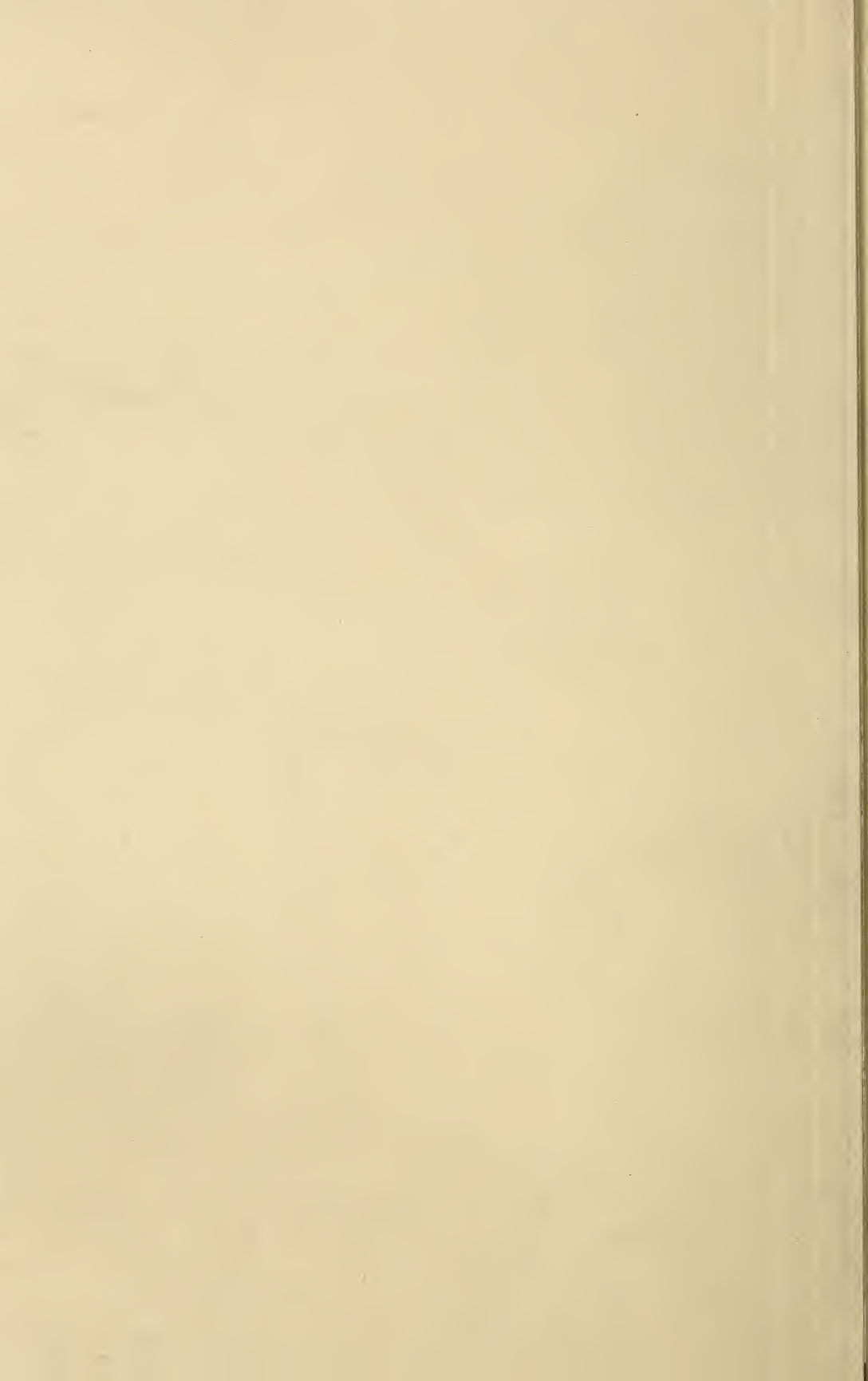


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# **GLEANINGS** A JOURNAL DEVOTED TO BEES AND HONEY AND HOME INTERESTS. **BEE CULTURE** ILLUSTRATED SEMI-MONTHLY Published by THE A. ROOT CO. \$1.00 PER YEAR MEDINA, OHIO.

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No. 13.



P. A. NEWCOMER says alfalfa in Iowa yields no nectar.—*American Bee Journal*.

A SECTION-CLEANER that I hope to see tried is a revolving wire brush with stiff steel wires two inches long.

THE *American Bee-keeper* values staples as spacers at each end of the bottom-bar to prevent killing workers and queens between frame and hive-wall.

THAT BOOKLET on "Child Training" would save lots of heartache if it were put into the hands of every one who has to do with children. I want a dozen copies.

THE *British Bee Journal* says average British clover honey weighs 13¾ lbs. to the imperial gallon, which would be about 11½ lbs. to our gallon; 7 lbs. sugar to 3 of water makes a syrup of the same weight.

REFERRING to p. 478, I don't believe the man lives who can tell by examining a queen-cell whether it's meant for swarming or superseding. But he can easily tell whether it's meant to supply a missing queen.

JUNE 8 I saw two bees on clover-blossoms with yellow pollen on their legs. The explanation came when one of them flew on a dandelion blossom, then back on the clover. But it hardly meant that clover was yielding well.

C. DAVENPORT makes a practice of swapping the two outside combs of the brood-chamber for two frames filled with brood. He thinks it helps to keep pollen out of supers, and also to prevent swarming.—*American Bee Journal*.

SENDING SECTIONS BY MAIL seems to be practiced in England, as gleaned from *British Bee Journal*. It would cost too much in this country, and perhaps would not be allowed anyhow. England is ahead of America in some things.

YOU SAY I once had "decimeters square" instead of "square decimeters." It was another man (I can't recall his name, but think he lived down south) who translated from French journals that made the mistake, and I

made the correction in Straws. But it's an easy thing to get things mixed. [I'll take it all back.—Ed.]

A CASE is reported in *British Bee Journal* in which the bees of a colony fought among themselves day and night, caused, as the editor thinks, by feeding honey from an alien stock. [A case of quarreling of this kind must be very rare indeed.—Ed.]

THAT BEE-SUIT mentioned p. 480 I've worn two years with great satisfaction. If you wear the bib pants as overalls—excuse me, too warm. If you wear them next the shirt, all right. For constant work you need four pairs unless your folks wash often.

AN ALSATIAN BEE-JOURNAL mentions that, at the request of bee-keepers, a law was passed making it a criminal offense to offer for sale at fairs and markets sweets except under glass, severely forbidding the enticing by sweets and destroying of bees.

HARRY S. HOWE mentions in *American Bee Journal* that he found many colonies this spring that had eaten the honey away from the top-bar, leaving that below. I gave up my skepticism on this point some time ago. Perhaps this will settle Bro. Abbott.

I JUST BELIEVE that 6 square inches of entrance at bottom and 6 more at top gives more ventilation than 24 inches all at the bottom—ventilation *through*, you see. [Ye-s-s-s. But ventilation through the top would be too much of a good thing; would it not, doctor?—Ed.]

SOME SAY that nails as frame-spacers make trouble with the wire cloth of extractors. Some say they don't. Perhaps the explanation lies in the diameter of the nail-heads. With a head as much as ¼ inch across, there is no trouble in this locality. [But you do not extract much, doctor.—Ed.]

JUNE 18. A remarkable month this has been—wet, but especially cool and cloudy. Within a week, killing drones and robbing has been the rule. First clover-blossoms four weeks ago, but no real weather for work on it till yesterday, and I don't know whether there's honey in it. [See editorials elsewhere.—Ed.]

WHAT A FARMER can do in the alfalfa regions with a few colonies of bees is shown



by the report of Wm. Stolley for 17 years, in *American Bee Journal*. His spring count, running from 6 to 48, averaged 24.7 colonies. His average per colony of extracted ran from  $1\frac{1}{2}$  to  $17\frac{1}{2}$ , the average for the whole 17 years being 53.6 lbs. The net income per year was \$218, or \$8.86 per colony. A poorer region, or a larger number of colonies would hardly make such a showing. And not every one could get such a big price for honey.

COME TO GET right down to it, bees do about the same in Medina as Marengo. Sixteen combs, or as many as they'll use up to the time of putting on section supers, then reduce to one story. Say, isn't that about as near contraction as you can come to it? [No, I do not call it contraction. I call it substitution. Why, I do not reduce the hive capacity at all, do I, doctor? I simply give them the same room in a little different shape. See my reply to R. L. Taylor, elsewhere in this issue.—ED.]

IF HONEY is extracted from sealed combs, part starting with foundation and part with full-drawn combs that have never had brood in, which will be best? is a question in *American Bee Journal*. About a fourth of the repliers think the foundation will have the advantage, the others think there will be no difference. [I suspect that, if the truth were really known, there would be no noticeable difference. I doubt whether any connoisseur having two samples placed side by side could tell the difference.—ED.]

INSTRUCTIONS for treating swarming colony with clipped queen, p. 477, are all right; but as a precaution the novice should be told that he must see the queen, for in a good many cases the clipped queen doesn't get back in the hive after swarming. [That is true; and that is all the more reason why perforated zinc with ample passageways should be used in connection with clipping. R. L. Taylor uses the zinc, and at the same time clips the wings of his queens. I wonder if it is not to prevent the queen from getting lost.—ED.]

LIKE OTHER THINGS in bee-keeping, facing honey seems to be a matter of "locality." In St. Paul the commission men believe in facing. (See p. 469.) But in ten other cities, according to replies given in *American Bee Journal*, commission men set their faces against facing. [When I looked over the replies in the *A. B. J.* it seemed to me it was a little one-sided—that is, I did not notice any commission man who favored facing. Now, I wonder how many of the bee-keepers this year, if they get any honey, will take pains to put the combs in the shipping-cases at random.—ED.]

D. N. RITCHEY writes me he got 400 pounds of the most beautiful honey last year when his bees had nothing to work on but red clover. Any doubting Thomas at Medina can at any time see the long-tongued bees three miles west of Granville, Ohio. [Why, doctor, our bees work on red clover more or less every season. I will wager that Ritchey's bees have not any longer tongues than ours; or, to put

the proposition another way, all Italians will work on red clover to quite a great extent. Are you really sure, doctor, that some Italians have longer tongues than others? Trot out your evidence.—ED.]

A FOOTNOTE, page 471, asks me to notice what Harry Howe says about metal spacers and the uncapping-knife. Yes, I notice. If I were a manufacturer I might insist all frames should be alike; but as it is, I don't care a blue bean whether my frames give trouble in uncapping or not so long as an uncapping-knife will never touch them. Now, honest, do you think I really should use a frame I don't like, just because of the danger that Harry Howe might not like it for uncapping? [Your question is a very hard one to answer. If I were in your position I should not know but that some time I might wish to run for extracted honey exclusively, or very largely, at least. Then how about those metal spacers on the uncapping-knife?—ED.]

HANDHOLES OR CLEATS—WHICH? is asked in *American Bee Journal*. Nearly all agree on handholes for shipping-cases. Most of them want handholes for supers. As to hives, 10 stand for handholes, 11 for cleats. This, in the face of the almost universal sending-out of handholes, is somewhat significant. G. M. Doolittle makes a point by saying, "The cleats save time in handling." Better give the option of cleats where purchasers are willing to pay for them. [Yes, our customers can have cleats any time in addition to the handholes if they will only ask for them, and will be willing to pay slight additional cost. But there has been no call for cleats on hives. Or do you mean to say that we should try to create a call for something that has real merit in the estimation of a few good bee-keepers like yourself?—ED.]

A VENTILATED COVER is cooler than dead air in summer, and dead air is warmer in winter. Why not have a hole in each end of cover to make the air live in summer, then cork up to make it dead in winter? [John B. Gough used to tell of a new kind of alarm-clock. When one wanted to get up all he had to do was to arise and pull a string, and the clock would ring a bell. I do not know, but it seems to me that, if a bee-keeper had to insert corks at a certain season of the year, and take them out again—well, he wouldn't do it, like the man who would lie abed and neglect to pull the string when he wanted to get up. But, seriously, there is something in your point that a dead-air space might be a compromise for both summer and winter, even if it were a little warmer than necessary in summer. This slight disadvantage might be more than made up by the extra protection in winter.—ED.]

A REMARK, p. 480, about getting tired of standing reminds me that there are three classes of bee-keepers—standers, kneelers, and sitters. You start out doing every thing standing or stooping. Then you sit or kneel a small part of the time when you have much to do. Sooner or later you settle down that,

as a general rule, you want a regular seat to carry around. I commend to you a glass-box with a cloth strap for a handle. [I belong to all three classes. When I get tired of standing, I kneel. Then when it is convenient for me I sit down on the hive-cover or on an empty super. And speaking of an apiary seat, an empty dovetailed super is about as handy as any thing I know of. When laid on one side it gives one height; when stood on end it gives another; that is to say, it is an adjustable seat. They are always present in our yards, without going any great distance to get them. Come to think of it, this adjustable apiary-seat is something you suggested. Our Mr. Spafford is a sitter, and our Mr. Wardell is a stander.—ED.]

H. H. MCKINNEY did a good thing, Mr. Editor, when he called out that distinct statement, p. 477, as to your views on eight and ten frame hives. I arise to remark that I don't believe I could by any use of the English language more clearly express my own exact views on the subject. For comb honey I want 16 frames from spring to harvest; 8 frames when supers are given, then 16 frames when supers are taken off; for outdoors, two stories all the time except when sections are on, but only one story for hauling and cellar. But when bees have little attention, a twelve-frame hive is better than an eight-frame. [I suppose real good criticism is good for a fellow; but, alle samee, good substantial indorsement like the foregoing makes one feel very much better for the time being. I know that I have good backing on the same question in York State, in Michigan—all over the United States; or, perhaps, more correctly, I should say I am backing up the other fellows who for years have been working two-story or large colonies in single brood-nests. In France the Dadant system (large hives and large colonies) is used almost exclusively. The Frenchmen say that their large hives get for them more honey than the small ones.—ED.]

"WE SHOULD MUCH PREFER," says editor Hill, "to undertake finding the queen in a strong colony than in one less populous." Although I might not put it in just that way, I must say that some of the most exasperating cases I've ever met were where only a handful of bees were present, and it seemed I could count every one of them. It's a mystery to me where the queens hide in such cases. [Give me the less populous colony every time, for queen-hunting. I have known of instances where I wasted time in trying to find a queen in a nucleus, but they are rare; but I nearly always have to take quite a long hunt for her majesty in a populous colony. By the way, when brood-rearing has been going on at a good rate I can trace her up often by hunting for eggs. For instance, the first frame has sealed brood; the next one, unsealed larvæ; and the next one young larvæ; the next one, larvæ and eggs. Well, now, if the queen has not taken a hop, skip, and jump clear off to another part of the hive, I am quite sure to find her on the next frame.—ED.]

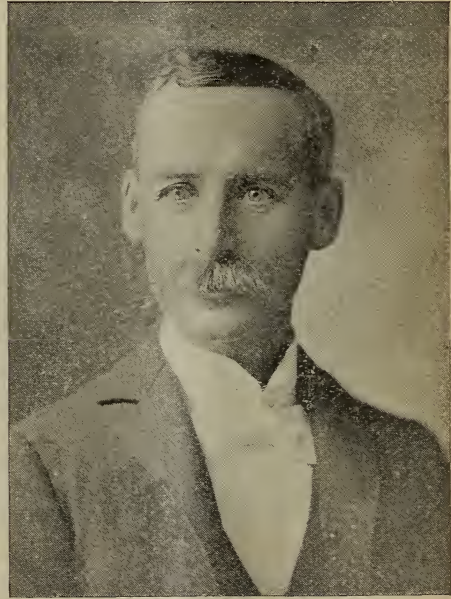


#### RAMBLE NO. 148.

The Ride to Calabasas; the Success of the Section-holder Super.

BY RAMBLER.

Mr. Brodbeck allows his bees to remain in the suburbs of the city until they get the full benefit of the fruit-bloom. This consists principally of apricot, peach, and orange. When the atmospheric conditions are just right the latter gives a large amount of nectar. The fruit source of honey is over in the latter part of April; the bees are then loaded on a wagon, and hauled to the location in the foot-hills.



G. W. BRODBECK.

A fine location has been secured thirty miles away, near the thriving town of Calabasas. Here there is a plentiful supply of sage, wild alfalfa, and buckwheat, in the hills, while the plains beyond bear many other honey-producing flowers. The photo shows not only a portion of the less rugged foot-hills, but also the valley beyond; and from an artistic point of view, as well as for sweetness, the location is unexcelled.

The apiary is neatly arranged upon terraces. The little honey-house is provided with a basement for storing the hundred and one appliances that are found in all well-regulated apiaries. During the active season the honey-tank is placed in the basement, and the ex-



tractor in the room above, and the work with the honey is all on the down grade until it is loaded into the wagons. This is a consideration that every bee keeper should have in mind when locating an apiary. It saves an immense amount of lifting and perspiring in this hot climate, and is conducive to a mild disposition and longer life.

At the time the accompanying photo was taken, 52 colonies had been taken from the terraces and loaded upon the wagon. This was also easy downhill work. The very efficient lieutenants who had charge of this work were Mr. Fassel, a young bee-keeper of Pasadena, and Mr. Feeree, of Los Angeles. That they are adepts at this work is proved by the fact that the entire hundred colonies were moved without the loss of a colony.

While moving, a shallow rim covered with wire cloth is nailed to the top of the hive, giv-

out of the question; but when he increases to 1000, which he proposes to do, I have no doubt he will adopt the Mendleson method.

The apiary at Calabasas is usually worked for comb honey. As before stated, the hive is what may be considered a shallow one. Two brood-chambers are used, and the queen is given all inducements to fill them with brood. This is attended to in ample time to have a strong force of workers ready when the main flow of honey comes. The upper brood-chamber is taken off, and, the super of sections applied, the bees have to go into the sections at once. Expansion to any degree is attained by tiering up.

The most beautiful honey the eye ever dwelt upon is produced in this apiary, and it commands the highest prices in Los Angeles. The  $4\frac{1}{4} \times 4\frac{1}{4}$  section is strongly advocated, and Mr. B. very pertinently asks: "What if



BRODBECK'S APIARY NEAR CALABASAS.

ing ample ventilation and clustering room for the bees. In the spring or autumn the bees can be moved without risk of loss in daytime; while if moved in the heated term, the only safe plan is to move in the night.

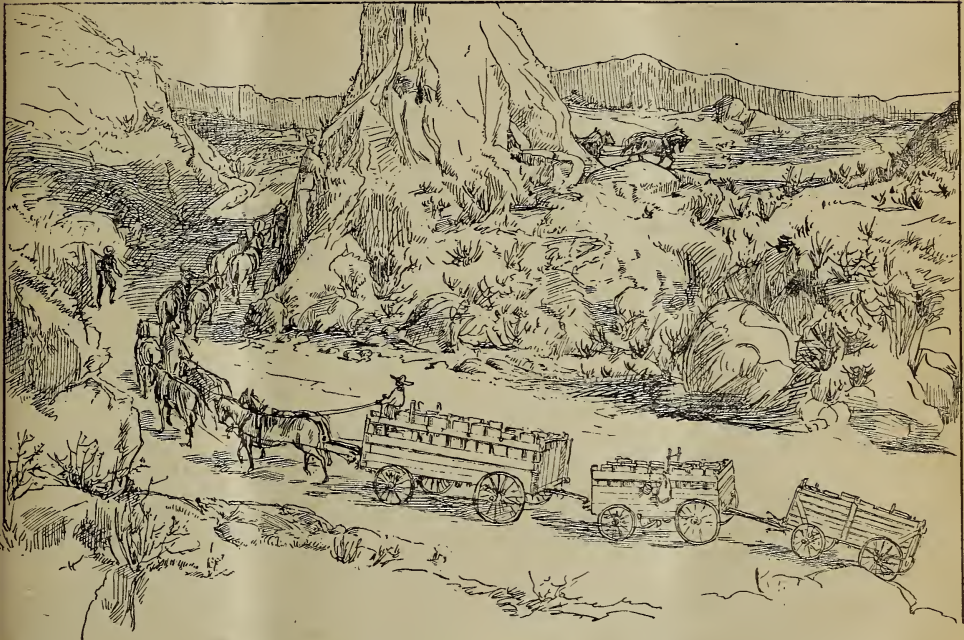
Mr. Brodbeck and Mr. Mendleson differ in their methods of migration. The former believes in making up a load for two horses, and allows them to trot over a good portion of the journey, making two trips for moving the hundred colonies. Mr. Mendleson believes that large loads and many teams is the proper way. In reasoning out the matter they are both right, for one prepares for moving 100 colonies, and the other for 1000. To show more plainly the different plans, I herewith illustrate.

The expense to Mr. Brodbeck for a grand outfit for moving his 100 colonies would be

all our honey is produced and placed upon the market in the tall Danzy section, or in the fence section, what is there to warrant a better price than we are now getting in the section in common use?"

Mr. B. attributes much of his success in the production of a superior grade of honey to the use of the section-holder super and the use of narrow starters in the bottom of the section. This insures a better filling of the section. During the past year, owing to cool nights and a superabundance of fogs, and a few other unfavorable surroundings, the bees did not take well to the sections. If the comb-honey plan had been followed-out, there would have been a light yield. Mr. B., seeing clearly this condition of things, changed a good portion of the colonies to the production of extracted honey. Having plenty of surplus





“THE WAY MENDLESON MOVES BEES.”



THE WAY WE WENT TO CALABASAS.

combs the change was attended with success, and a yield of about twelve tons of honey was the result.

Another bee-keeper in the same field, with double the number of colonies, secured but little more than the above, which clearly shows that the bee-keeper is the main factor in the production of a large honey-yield. The bees will store honey under very unfavorable circumstances if the management is adapted to the conditions of climate, nectar secretion, and strength of colony; and the best results are obtained only through the exercise of prescience; and I believe that quite a number of our most successful bee-keepers, those who have followed the business for years, gradually attain this faculty.

When the season's work is all done in the foot-hills, and after the fruit is all gathered and dried in the city, the bees are then brought in during the cool autumn days. They have been culling flowers that are scant of honey for many weeks in a dry pasturage, and it is with a more joyous hum they go forth near the city where the eucalyptus and alfalfa are in bloom. It is a hard jaunt, however, to move bees, and even Mr. B. longs for a place where bees can be managed without the necessity of the moving process.

Mr. Brodbeck, wishing to initiate me into the management of an apiary thirty miles away, kindly invited me to take the journey to Calabasas with him. I accepted the invitation. Mr. B.'s pet horse, Prince, and Mr. Feeree's horse, drew our vehicle. It was loaded with various bee-fixings and a large box of provisions.

"Why, Mr. B.," said I, "you don't expect us to use all those provisions in three days' time, do you?"

"It is well enough to take along a good supply," said he; "then I had to put in a few scraps for Juno and Fido."

"Oh! I see," said I, "the terr — the dogs are going along too, are they?"

"Yes," said Mr. B. "They are so sad and lonesome when I leave them at home. They enjoy a ride just as much as a person. I do like to see them enjoy themselves."

Well, we started; and I must say the terrors did enjoy the ride. The artist can shown in a manner plain and words how we four enjoyed the scenery on the way to Calabasas.

My previous experiences with Prince led me to believe him to be a slow quadruped, and I suggested as much to Mr. Brodbeck. He acknowledged that he might be slow sometimes when driven alone, but with another horse his ambition was to keep ahead. Mr. Feeree's horse had the same trait, and between the two we should fly like a leaf before the wind.

When we started out in the morning, and the horses were feeling fresh, they did very well for a few miles. Mr. B. shouted back to me several times, "See how we fly! I told you so!"

Just beyond the city limits we cross a little range of hills through the Calhuenga Pass. At the very entrance of it, and at the foot of the grade, we encounter a dwelling whereon is a sign bearing the following words: "THE

LAST CHANCE;" and the horses, acting as though they had finished their journey, turned right up to the front door.

"Hello, B.," said I, "is this Calabasas?"

But brother B. was striving with the whip, and, after a while, made out to get up a locomotion of the horses again, making a few remarks about that Feeree horse.

"That's right," said I, "lay it all to Fer—" But I said no more. Those terrors had such a baleful look at me that I hauled my umbrella over my head and kept quiet; but those horses, so greatly were they disappointed over the non-halt at the Last Chance, they now tried to see which could walk the slower. Ah me! that was a long road up the west side of the San Fernando Valley. I had ample time to view the landscape. Every few minutes I wanted to shout, "I told you so!" but those terrors were on the alert to resent any intrusion on their master's dignity, and again I kept quiet.

Toward evening we drew up to the little cabin. The dogs were, fed and put to bed early; and, finding such a relief, I forgot the trying episodes of the day; and during the rest of the stay I had a very enjoyable time. I had no further tribulation while at the apiary, for, keeping near bees, there were no canines to bother; in fact, I had the upper hand of the dogs there, and that was an immense compensation for the previous inconvenience they had caused. For many days I will remember my visit to Calabasas.

#### SELLING COMB HONEY TO GROCERS.

Be Your Own Drummer; Work for and Expect Large Sales; Be Businesslike, and Answer Objections; Labels and Second-class Sections.

BY G. K. HUBBARD.

*Editor Gleanings:*—Although you have published a number of articles on the subject of selling honey, I thought it possible that I could contribute something on this that would be helpful, and that might encourage some one to make an effort in this line who has dreaded to undertake it. The object of this article is to encourage those who have a crop of honey to dispose of to sell it at the groceries in neighboring towns, thus accomplishing the desired result of getting better prices and keeping the small shipments from going to the city commission men.

We Californians are doubly interested in keeping honey from going into the city markets, for the reason that we are compelled to sell our product there. There is no escape from it except for those who have small amounts to sell. Our honey must of necessity go to market in carload lots of 1000 or more cases, and it is only the large cities that can handle it in such quantities. The smaller cities and flourishing towns offer a splendid market at fair prices, and ought, in nearly every case, to be supplied without the grocers having it shipped in from the wholesale cities. The cost of getting a pound of comb honey to



the eastern market, counting the loss from having to pay the freight on the cases, is about 2½ cents for freight, if shipped in car lots. Less carload, if we care to take the risk of breakage, the cost per pound, with the extra crating necessary, is 4½ cents. This extra 2 cents, with the accompanying risk, shuts us out of any markets except those that can handle honey in car lots, and this leads me to emphasize the point that the smaller cities should be supplied from the surrounding territory, and the city markets largely left to those who are of necessity compelled to use them.

Now, my reader, if you have a crop of comb honey of from 20 cases anywhere up to 200 or so, I suggest that you sell it to the grocers in your surrounding territory. You may answer that you are not a salesman; that it takes time and ability to push off your crop a few cases at a time; that you would prefer to take less for it and see it all go at once than to get more in smaller sales. Of course, you would if the difference were not too great; but the difference is too great for you to afford if you wish to make the best success from your pursuit. Suppose it does take time to sell a crop; if it pays you well for your time, can you not afford to take it? I wish to urge you strenuously to make a brave trial and see if you do not get along better than you expected.

I am going to give some experiences and suggestions, and will say at first that you might make a score of calls and not use many of the ideas; but if I give you the idea of how it can be done, your tact and good sense will suit your talk to the right person. I can not map out a minute program for you, but I can give you some insight of a plan that has proved very profitable to me, and incidentally you will learn something about my ideas of having a crop in such readiness for market that it will command the highest price the grade will bring.

You probably know all that is to be known about your own home market. You often go to town to do your trading, and know as well as any man in the community about how much honey your grocers have on hand, and what the possibilities are for business. As an almost invariable rule you will never make a large sale in the town where you are best acquainted. Your merchant will say, "I might take one case of you. You are in town often, and I can get more of you almost any time." Therefore I urge you to make a longer drive, get out of your own immediate community, where you will have a fighting chance of selling several cases to one customer.

Start with a load of 10 to 20 cases, according to the size of the place you are going to visit. Put on the best suit you have; collar and necktie; if you ever wear cuffs, do not leave them off this time; give your shoes an extra good shine, and look just as neat as possible. You are not a farmer or bee-keeper now; you are a business man, and are going out to do business in a businesslike way. Take along your horse-feed if you wish; but go to a modest hotel where you can get a meal for 25 cents, and have the almost as desirable point

of being able to wash, and to brush the dust thoroughly from you, from hat to shoe-sole. I do not think I overestimate the value of your personal appearance. While clothes do not make the man, they do, very largely, make the estimate that people place upon you, especially among strangers. You will walk with a firmer tread, and feel more like business, if your appearance is not being criticized, but, instead, is helping you to appear as though you meant business. I trust my reader's good sense to understand me aright, and not think I advocate unreasonable extremes.

You know what your honey is worth, and the price you ought to get, which should be enough above the price at which you hold the entire crop to pay for the time you put in distributing it. Adopt your prices for your different grades, and stick to them, treating all alike. It is all right to miss a sale occasionally on this account, as it will save you so much time, and be such a help in making sales to these parties in the future.

Being all in readiness to be your own "drummer," go to the leading grocer, and be as pleasant and polite as possible. Make your business known at once, for busy men do not care to talk much with strangers about the weather, crops, condition of roads, etc.

"I have driven over from Blankville with comb honey, and this case is a fair sample of my best grade. I take a great deal of care in producing a good article, and casing it up fair, and I think, if I could sell my load to you, you would find it to give good satisfaction to yourself and to your customers."

Of course, he will look at the honey, and likely pass his opinion upon it, comparing it with the honey he has handled. You will soon know whether he is at all interested or not, whether he is well stocked, whether or not he is supplied regularly, as his trade demands, by some home bee-keeper who is his regular customer, and who may put an article on the market that compares favorably with yours. If there is no chance at all for a sale, bid him a pleasant good-day and tell him you will probably see him again some time when he is nearer ready to buy. Then if he wants to visit a little with you, and start an acquaintance, meet him half way, letting him make the advances; but make it short, and leave him with the impression that you are out for business, and that your business is just as important to you as any other man's business can possibly be to him.

The next grocery you call at, the man you take to be the proprietor is busy. After waiting a little, and you see he is not apt to be through with his customer very soon, you start out. Likely he or one of the clerks will inquire if you wish to get anything; but you reply that you have a little business with the proprietor, and that you will call again in a little while. Thus you save your own time, and impress the grocer that you are a man of business, and too much of a hustler to waste your time waiting for some independent chap to give you a little of the time he wants you to think is so extremely precious.

At another grocery you see at once that the

proprietor is interested in what you have. He has but little honey, or none at all; and when you see there is probably a chance to sell him some you say, "I have just come to town, and have talked to but one man. I am very sure you could do well with the honey I have if I could sell it to you. I have only 15 cases with me—7 of the fancy grade and 8 of the dark; and if I could sell you my load, I am confident you would realize well on the purchase."

He looks at you with eyes wide open; he thinks to himself, "Fifteen cases of honey at one purchase? Gracious! wonder if he thinks I sell all the groceries used in this county." But all the same you have made a favorable impression. You have flattered him by assuming that he is one great big merchant, and you have impressed him with the idea that you are out to do business on a big scale.

"Fifteen cases? oh! I couldn't use that much. You see, the grocery business is terribly cut up here. There are many stores, and of course every man has his friends. We never buy very heavily. We keep pretty close to shore, as the saying is; but then I don't mind buying a few cases of you if I can get it right."

If you had taken in a case and asked him to buy it he would hardly have thought of asking for more; but now that you put the idea into his head of buying the load he feels safe in risking a few cases. Likely you sell him three of each grade. You set the cases in a conspicuous place and he remarks that it looks like enough to run his trade for three months; but you thank him for the money, and wish him better luck in moving it than he imagines. You certainly would not have sold him six cases if you had tried to sell him one, and it is almost as certain you would not have sold him six if you had not first talked up the sale of your load.

Now you go back to the man who was too busy at your first call. You tell him your business, and where you are from, and that, as he will be soon out of honey, he is interested in what you have to say; but he is one of those men who always want to cut and slash prices; and to do this he begins to talk hard times and low prices.

"I have only nine cases of this left, and I should like to sell you the lot."

"But your price is too high."

"I do not think so, considering the quality I furnish."

"But I can get it shipped in from the wholesale houses and commission men in Blank City for at least a cent, and likely a cent and a half, less than your prices, and get my business discounts besides."

"It is barely possible that you can do as well; but I very much doubt about your getting as good value for the money as I offer you. There is the risk of your not getting as good an article as you expect when you place an order, and also risk of breakage in transit. I am right here with the honey; every section of it is in first-class condition; you can see exactly what you are buying—no freight, drayage, or breakage; and if any case I sell you is not as represented I will take it off your hands

next time I come over, without any hard feelings on the part of any one, or a lot of unpleasant correspondence over such a matter. I sell to every one alike; and while it is natural for every buyer to want to do a little better, and have a small advantage over his competitor (and I do not blame you for it), at the same time I know by experience that it is more satisfactory all around to treat all alike. You can make 25 per cent easily enough on my honey at the prices I offer; and the rebate on the cases when empty, if you will let me have them back in good condition, will more than equal the business discount you mention. If you had these nine cases standing up front here I do not doubt it would attract as much attention, and make as fine a show, as any lot of honey you ever handled."

He tries to beat you down on the price; but you are firm, though very gentlemanly, and, as a result, he concludes to take two cases of fancy and two of dark, after you have reassured him that you will be over again in 60 days or so, and will pay him 10 cents each for the empty cases if he keeps them in good condition.

Riverside, Cal., June 8.

*To be continued.*

#### BEE-KEEPING IN "MERRIE ENGLAND."

J. H. Howard, Holme, Peterboro, England, and his Apiary; the Weed-foundation Man of England.

Just 14 years ago the site of the apiary pictured in the illustration was an uncared-for and waste corner of land in Holme, near Peterborough, Mr. Howard at that time leaving his native town of Huntingdon, and taking up his residence there, to serve as builder, etc., to the late W. Wells, Esq., then owner of the extensive Holme Wood estate. We understand the "squire" gave much encouragement to Mr. Howard, and when the latter had fully equipped his apiary with hive, bees, and manipulating-house, besides planting the spare ground with fruit-trees and flowers, frequent visits were paid to the apiary by Mr. and Lady Louisa Wells, and their numerous visitors and friends. The late William Raitt, after visiting most of the more important British apiaries, on seeing Mr. Howard's place at once named it "The Model Apiary"—a designation its owner is justly proud of, as coming from the well-known Scotch bee-master. The rather exceptional nature of Mr. Howard's surroundings has placed him in touch, as it were, with some of the best families in the country, an advantage he has put to good use in forwarding the general interests of the craft. In order to thus secure the patronage of influential people—whose position in country districts enables them to render so much help—modern bee-keeping has at all times been demonstrated with live bees, and their work at the "model" apiary, and impromptu lectures, given on many occasions by Mr. Howard to select companies of ladies and gentlemen interested in the subject. In fact, the manipulating-house was



designed and built by Mr. Howard, with a front of glass, so that a good-sized and safe auditory within could witness the opening of a modern frame-hive, and see the bees and their work, as shown and explained by him from the outside.

In giving us some detailed particulars regarding his apiary, Mr. Howard writes: "The manipulating-house faces due south, doors being so arranged that I can enter direct from any path in the apiary. All windows swing on their center, so that bees finding their way into the house may be turned outside at once. The hive fronts face southeast and southwest. The view looks from east to west.

"In 1897 I secured 160 one-pound sections from the single hive seen third from the end of the center row, immediately in front of where I stand in the photo."

Among particulars as to his past and present bee-work Mr. Howard says: "Before the

adjoining my house. For at 'Holme' not only bees, but flowers, fruits, and vegetables get attention."

"In the center of the Model apiary," our friend continues, "you will note Mrs. Howard has ventured—note also how carefully she has marked out her line of retreat! for somehow bees always leave such 'well-marked' evidence of any close attention they may pay her that this bee-master's 'model' wife prefers confining her bee-work to apiary products and putting them up for show and market, rather than coming in close 'touch' with the bees. Still, my better half is now more in sympathy with bee-life than when she first became Mrs. H., and thought that 'bees had no mission but to sting!' My foreman, standing after a manipulation hard by the manipulating-house, completes the figures in the picture."

With the multitude of things to be seen to



APIARY OF J. H. HOWARD, HOLME, PETERBORO', ENGLAND.

manufacturing business pressed heavily on me, as it now does, I went about a good deal showing products from my apiary, which have won me not a few medals and prizes. Here also I have gained and am still gaining that practical experience which is so necessary to guide the teacher and the taught aright in giving advice asked for by my many correspondents."

Mr. Howard then characteristically adds: "So far as the picture of my bee-garden, I may say that in the view, and opposite to 'Churchwarden' Howard, stands the 'Parish Clerk,' fork in hand. This is the 'official' who, directed by his superior officer, attends to the apiary garden and the other garden

daily, and the many public offices he fills, Mr. H. is a less frequent operator in the apiary now than formerly, especially during the past season of 1897. For, having purchased and imported special machinery, he has had personally to see to the work of turning some tons of beeswax into comb foundation by the "Weed" process, for which he is sole patentee and manufacturer in Great Britain.

[This is the second of a series of illustrated articles, the plates for which, as well as the material for the write-up, were obtained from the *British Bee Journal*.

We have had quite an extensive business deal with Mr. Howard, and it gives me plea-



sure to say that those dealings have been of the most satisfactory kind. When we were drawing up contracts, Mr. Howard, so far from insisting on certain features that would be to his advantage, actually went so far as to suggest certain clauses that would be to our advantage and a possible disadvantage to him. Yes, he is the soul of honor, and a man whom it is a pleasure to know, in more ways than one.

He is the sole manufacturer of the Weed foundation in England, and having all the latest machinery, he is capable of turning out a product that will equal that turned out at Medina under the direct supervision of Mr. Weed himself.

If there were more men in the world like Mr. Howard, there would be less strife and more brotherly love; therefore it gives me peculiar pleasure to introduce our *brother* from "Merrie England."—Ed.]

### TOO MUCH HONEY IN THE HIVE.

BY HARRY LATHROP.

As a rule, bee-keepers are not troubled with too much honey; but there are times when the brood-chamber may have too much for the best interests of the colony. In the earlier days of the extractor some writer advised to "keep the extractor going," and added that it would even pay to extract from the brood-chamber, and throw the honey away in order to give the queen room. If bees are properly handled there will be very little extracting from the brood-chamber. The ideal condition for colonies in the spring in this climate is to have them as my Browntown yard was this year; that is, come out of winter quarters quite heavy in stores, breed up rapidly, consume the honey in the combs and replace it with brood, all stores to be consumed, and hive completely full of brood at the time honey begins to yield in excess of the daily consumption, at which time supers are added.

There is another condition I do not like, but one which I find in my Monroe apiary—a condition in which the colonies come out heavy with honey but rather weak in bees. Colonies build up slowly, and, instead of reducing the amount of honey in the combs, add to it from early sources. In such cases this honey must be promptly removed or the colony will not amount to much.

My plan is to remove full combs and insert sheets of foundation in the center of the brood-chamber. The full combs removed, I sometimes use, to contract, brood-chambers in which I hive colonies to be run for comb honey. A full comb of honey is as good as a dummy for that purpose.

I was quite interested a few years ago in Mr. Boardman's plan of feeding up in the spring, and two years ago last winter I spent a very pleasant day visiting at his home, and conferring with him in regard to it. I expected to try his method, and got a lot of feeders ready, but I have to confess that at this time I have had no chance to do any

spring feeding since then, for the reason that I got all the honey I wanted, and sometimes a little more than necessary, from the fields. For my part I am glad of a condition which enables me to dispense with *all* feeding.

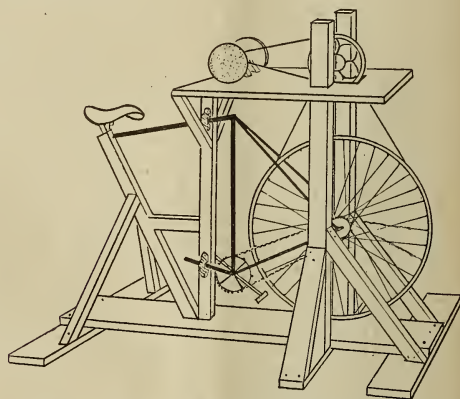
Browntown, Wis., June 1.

### THE BICYCLE SECTION-CLEANER.

How to Make One.

BY ARTHUR HOWE.

*Mr. Root:*—Inclosed you will find a drawing of the section cleaner and polisher I use, which is, I think, far superior to the Aspinwall or Golden. It has two wheels, as you can see. One is covered with No. 1½ sandpaper, for cleaning the rougher propolis from the section. The other is covered with emery cloth to finish with, if one wishes to polish the sections as nice as when they came from the factory.



This cleaner, as you will see, is made by using an old bicycle for the power, which is geared so that one pedal revolution equals a wheel 66 inches in diameter. The wheel above is an old sewing-machine master-wheel, set in ball-bearings, to which is bolted a 4½-inch pulley. The belt from the bicycle-wheel is crossed and passed over this pulley, which gives it, with the sewing-machine wheel, 14½ revolutions for each pedal revolution of the bicycle. The sewing-machine wheel is 12 inches in diameter, and is connected by belt to a 2½-inch pulley on the polishing-lathe, which gears the lathe to 70½ revolutions for each pedal revolution. Multiply this 70½ by the number of times one can pedal a bicycle per minute, and you will have some idea of the speed of this polishing-wheel. I have tested it with a speed-indicator, and got 7000 revolutions per minute.

When polishing sections I run it at from 1200 to 1800 revolutions per minute, which is a very easy gait. The cleaning-wheel one can make as large in diameter as he wishes or has sandpaper to cover. I make this wheel two inches face; first cover the face of this wheel with two or three thicknesses of felt, then cover with sandpaper. The felt serves as a cushion under the sandpaper, making it wear



longer and do better work. By pressing on the edges of the sandpaper you will find that it gives enough so that, with very little practice, one can clean the "scallop" as easily as any other part of the section. It will cut it out as nicely as can be, and do it quickly too.

If you have any misgivings as to the rapidity and quality of work this cleaner will do, have Mr. A. I. Root take his next bicycling-tour on a wheel of this kind, polishing sections. A stormy day will do as well as any. Then if he does not admit its value, and give it great praise, I'll know it will be because he is kept too busy blowing sawdust from his head, for I find one needs a protector over the nose.

You can put your sandpaper on the diameter face of this cleaner if you like. I once thought it would be best, but have changed my mind.

The bicycle used in making this machine was an old cast-off one, and cost me nothing. The labor I performed myself. It was also cast-off labor, so I paid nothing for it. The polishing lathe-head, belts, ball bearings, and other material used, cost me \$3.50. Any one who can pick up an old bicycle, and is handy with tools, can make a cheap section-cleaner, and have a good tool for other kinds of work requiring speed rather than great power, such as an emery wheel, small grindstone, drill, lathe, or a small saw. One sheet of sandpaper will clean a case of 24 sections.

Colfax, Wash., Feb. 13.

[Your scheme of using a part of an old bicycle to secure speed is very ingenious. There are hundreds of old "bikes" out of date and out of order that are unfit for road service, and yet would do nicely as a part of a section-cleaning machine. Even if the tires are worn out and won't hold air, it makes no difference. They are to be yanked off, and the hollow rim that held the tire will be just right to hold a belt.]

Twenty years ago I used to operate a bicycle scroll-saw made by W. F. & John Barnes, and still put out by the same firm, I believe. It was the most practical man-power machine of anything I ever tried. Indeed, I rather enjoyed kicking the pedals, for it was easier to keep my legs going on this light-power machine than it was to keep them still.

For a home-made affair I am not sure but this section-cleaner beats any thing heretofore put on the market.—ED.]

#### SECTION-CLEANERS—A SUGGESTED IMPROVEMENT.

Fences; Sections 9 and 8 to the Inch; Reasons why the Latter should be Used.

BY FR. GREINER.

*Friend Ernest:*—A few days ago I had a very pleasant call from friend Harvy Perry, of Bristol. Mr. Perry is one of our most successful comb-honey producers. I am not sure that you met him when you visited this section last fall. He has not been in the business as long as many of us, but he has mastered his trade. He does not fall in love with every new

fad at first sight, but experiments on a small scale till he finds out by actual test what a thing is worth. I am always glad to meet Mr. Perry, and never fail to learn of him something of value. He has an eye for business; and if by any new method he can increase his honey crop, produce a better article, or lessen the amount of labor, he is not slow to adopt such. We had a genuine bee-talk together; and as some of the things might interest you, I will write them down.

Our conversation naturally drifted toward the section cleaning machine. Friend Perry has studied out one on the disk principle, which he is sure will work well; but, not being situated so he can build one himself, he said to me, "Tell Mr. Root about it when you write him again," and so I will.

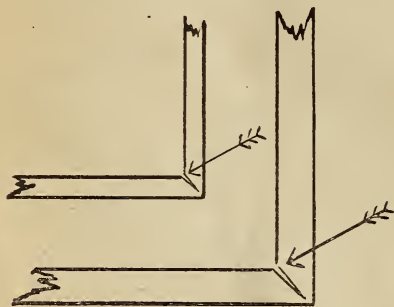
Well, his idea is to have a disk fitted out with rasps next to the periphery, and with sandpaper in the center. The rasps are to take off the bulk of the propolis; then by sliding the section to the center of the disk the sandpaper is to finish the job. As the rasps would in all probability gum up in time, he proposes a wire brush on a revolving cylinder, to be brought to bear against the rasps by means of a lever at the will of the operator, and thus do the work of cleaning from time to time as it may seem necessary.

I should not wonder if a machine constructed on this plan would work nicely. Simply by means of a jack-knife I am able to clean from 400 to 500 sections per day (depending somewhat on the amount of propolis on the sections), take them out of my wide-frame supers, grade, and crate in the bargain. I don't understand in what condition neighbor Root's honey must be (see GLEANINGS, Apr. 15, page 298), if he can not clean more than 100 sections per day. I have raised comb honey near his locality, and did not find any more trouble than I do in my own. A section-cleaner may not hasten the work very materially, but will, of course, do the work so much better that we shall all be anxious to use it, so we are awaiting the development with anxiety, and hope a perfect-working machine will be out by the time we need it.

Now, what about fences? Well, let us go slow. That is Perry. I myself had intended to fit up 100 supers with fences; but after talking the matter over at our convention last winter and since, I have concluded that 25 supers will be enough for a trial. If you establish that new department, "The Asylum," Mr. Editor, I am afraid a good many of us "will be there." The older bee-keepers, who commenced with the swinging frame and the wide-frame supers, can not well follow all those radical changes of late except by way of experiment. I know quite a number of extensive bee-keepers who still cling to the above-named things—even a cleat on the supers and hives. With many of us it was a sort of "happenstance" our starting in with this or that kind of hive, frame, or super; and now, after being well equipped, we do not feel as though we could afford to change to other styles, although we may deem it desirable. If I could sell out, I might adopt the

newer styles of hives and supers. Friend Perry is an advocate of the loose swinging frame, but favors the half-story brood-chamber. He wants his frames a full inch wide all around—tops, sides, and bottoms. I have fitted up 50 half-story brood-chambers with spaced frames, using blind-staples for spacers between frames and on the ends. I have used some fifty or sixty T supers and 125 of Root's combined honey and shipping case of twelve years ago, but at present I use nothing but wide-frame supers, which I may in time fit out with fences, depending on the success we have with them.

In regard to the sections of the present day, we decided that some manufacturers get them out *too thin*. They should be  $\frac{1}{8}$  inch thick; that is the least. When thinner the honey is more apt to be injured in handling—quite an object now, as we are about to use the section-cleaner. The thin section, on account of less shoulder, is not as firm of itself (as shown in Fig. 1). Secondly, when a thinner section is used in connection with the slotted separator, the danger of the honey being bulged out is increased, as the space (as indicated by the arrow in Fig. 2) is slightly enlarged.



The third reason why we want a section not less than  $\frac{1}{8}$  inch thick is this: Our sections cost us now \$2.50 per thousand. They weigh about 60 lbs. We sell them as honey at ten cents, which gives us a gain of \$3.50 over the cost. When sections are dressed so thin that the weight is but 50 lbs., as now, then we actually lose \$1.00 on every 1000 sections.

The Cowan honey-extractor I received from you is a very fine piece of furniture for a honey-house, and no mistake. However, it did seem to us that some space is wasted at the top of the can, that would be of great value at the bottom, for storing.

Naples, N. Y.

[The idea of having a disk fitted out with a metal rasp surface next to the periphery, and sandpaper in the center, appears to me to be very feasible. If it should get filled up with propolis—that is, the metallic grating surface—it could be cleaned with a little gasoline, and by that time the sandpaper would probably need changing. I hope all our friends of a mechanical turn of mind will give section-cleaners a trial. Then do not forget to tell the bee-keeping world about them.

Yes, it is quite true that the style of frame

or hive used by many bee-keepers has been regulated by "happenstance" rather than by preference. Dr. Miller, for instance, bought out an old apiary years ago, the frames of which were almost Langstroth in dimensions, and yet not quite. We do not and never have advised bee-keepers to throw aside old implements, but, for instance, in the case of a beginner or where one is starting an out-yard, and has to buy new goods, then we advise buying the latest.

With regard to sections 8 and 9 to the inch, the relative difference in size is not nearly so great as that shown in the drawings herewith. If both were drawn to a scale it would be very difficult to tell which one was which; and the relative difference in strength is, I think, so small as to be inappreciable. But there is a difference of a dollar a thousand, no doubt, in your locality, in favor of the pocketbook of the bee-keeper *after* the sections have been placed on the market, filled with honey. We are willing to make whatever the trade calls for. But many Western bee-keepers favor 9 to the inch because, in car lots, they have less freight to pay, and, consequently, the sections cost less.

We are glad to have all these points discussed, even if they do make our goods appear at a disadvantage in comparison with those turned out by some good competitor. Let the truth come out, hit where it may.—Ed.]

## HOW QUEENS PIPE.

BY H. LINDSAY MILLER.

In the last few numbers of GLEANINGS for 1897 there are several notices, letters, and "Straws" about queens piping; and friend Arwine, on page 846, talks about "notes of defiance" and "wails of agony." No doubt he is an expert at the language.

I am afraid that bee-keepers have often anticipated the queens, and made them say what they (the bee-keepers) thought was appropriate under the circumstances. I have often heard a young queen pipe just after she had left the cell; but I have never been able to make out that she was "spoiling for a fight." Again, I have frequently seen bees ball their queen, though I don't remember having heard the queen make a remark during the operation. But if a queen did give expression to her thoughts at such a juncture, I don't think that even friend Arwine could expect her to say, "Well, I *am* having a good time."

What I want to say is that, in dealing with this matter, or any other matter connected with bees, what we have to do is to give up speculating and theorizing, and come down to facts. Let bee-keepers observe what happens, and make a note of it. Don't expect to find it out all at once. The facts you record may be of no use to you at the time, but they may be of immense use to some one who is working at the same matter, or who will be working at it in time to come.

Some years ago I was rearing a lot of queens, and making nuclei for them, and it nearly al-



ways happened that, when I was doing any thing with the nuclei, the young queens would pipe. This would frequently happen while I had the frame with the queen on in my hand, and time after time I have watched the queen during the process. The queen was generally moving quickly about, as young queens are apt to do when disturbed; but when about to pipe she would always stop, press her thorax and abdomen against the comb, and bend her head back till the part which usually faces directly forward was looking directly upward. This bending-back of the head was the most decided movement made. It would occur as the sound was emitted, and between the notes the head would return to its normal position. The wings gave slight tremors, but not sufficient to account in any way for the sound. I never saw a queen "running about and piping." They always stopped still during the process.

It seemed to me it was not a very easy matter for the queen, and always seemed to call forth a good deal of effort on her part. I think it may be considered settled that the wings have nothing to do with piping. The facts noticed by Frank Cheshire and others, of queens piping when the wings were absent, should set this point at rest.

Warrnambool, Vic., Aus., Feb. 4.



#### SUCCESSFUL BEE-KEEPING.

*Question.*—I am a beginner in bee-keeping, having just purchased two colonies, and subscribed for GLEANINGS. Will you please tell me through your department in that paper, in brief, how I may become a successful bee-keeper?

*Answer.*—This is giving me quite a task, and one upon which might be written enough to fill many numbers of GLEANINGS, and even then "the half never be told." In fact, all of the thousands and millions of words which have ever been written on the subject of bees have had "successful bee-keeping" as their object. Yet, out of the thousands who have read the words written on this subject, how many have become successful bee-keepers? I venture the assertion of not more than one in ten. And before I pass on to the "brief" of the matter, allow me to say that the *success* in bee-keeping, as well as in any other pursuit in life, comes through the *man*. If you are willing to put your whole life and being into apiculture, there is little doubt that success will crown your efforts; but if you go at it in a sort of listless, go-as-you-please spirit, you will stand the same chance others have stood, of recording "failure" on your banner.

Now, in brief, to be successful the apiarist must have a simple movable-frame hive of some kind; and the main work up to the general honey-harvest, the time of which

should be familiar to the apiarist, should be to secure as many bees as possible on the stage of action at just the time that *harvest arrives*. All know that bees gather honey or nectar, instead of producing or making it, and that the eggs laid by the queen produce bees; consequently the more eggs the queen lays, the more bees we get; and the more bees we have at the right time, the more honey they gather. In fact, one way of looking at it is, the queen is the producer of the honey. Therefore if we wish good returns from our bees we must see to it that we have good prolific queens, and that they fill the combs with brood before the honey season commences, so that, when the honey harvest comes, the bees will be obliged to place the honey in the sections, or surplus-apartment, as there will be nowhere else for them to store it.

But how shall we secure combs full of brood and plenty of bees to carry on the labors of the hive by the time our honey harvest begins? As soon as spring opens, our bees should be examined by lifting the frames of each hive; and if the colonies are weak the bees are shut to one side of the hives by means of a division-board, so as to keep up the necessary heat for brood-rearing, on as many combs as they can cover. As soon as the queen has filled these combs with eggs I part them in the middle, inserting a comb of honey which has had the sealing to the cells broken by passing a knife flatwise over them, between those occupied with brood, and in a few days the queen will fill this also, and so we keep on until every available cell is occupied with brood. If the bees can not use up all the honey given at each insertion, give an empty comb occasionally, and do not put in either till those combs they already have are fully occupied with brood; for if you do a loss rather than a gain will be made.

Thus it will be seen that, instead of the queen laying her eggs on the outside of the cluster, she lays them in the center of the brood-nest, where they should be. After the hive is full of brood and bees it does not make so much difference, as the weather is warm and bees are plentiful, so that the queen can deposit her eggs anywhere in the hive.

As soon as the strongest colonies have their hive full, take a frame of brood just gnawing out and place it in the weaker ones, giving the strong one an empty comb for the queen to fill again, and so keep on until every hive in the apiary is full of bees and brood. When this is accomplished put on the sections, and, as was said at the commencement, if any honey is gathered it must be put in these sections. Each section should have a small piece of white comb or a strip of comb foundation attached to the top as a "starter," and to cause the bees to work more readily in them. The center tier of sections, if possible, should be full of comb left over from the previous year. As soon as one-fourth of the sections are filled they should be taken off before being colored by the bees passing over them too long, and empty ones put in their places, thereby causing the bees to work with renew-

ed vigor to fill up the vacant space left where the full ones were taken out. Thus keep taking out full ones and putting empty ones in their places as long as the honey season lasts.

This, in short, is the way I work my bees; and until I entered the queen-rearing business to so great an extent as to have to draw from every colony to supply that business, my average yield of comb honey was not far from eighty pounds per colony, covering a period of over twenty years. The highest average yield in any year of the twenty was 166 pounds, and the lowest was 33 pounds.

I have not written any thing new in the above—simply tried to emphasize that which has been put before the public before, for it often seems that we mortals must be told things over and over again before we can have the right kind of knowledge beaten into us. But after a while some of us do learn, though it be something after the fashion of the man at the revival meeting. The story runs thus:

A good zealous camp-meeting brother had a habit, when praying, of "beating the air," throwing his arms about in all directions. During a revival meeting the brother succeeded in getting one of the toughest characters in town to go forward for prayer. Then he knelt beside him and began to pray for him; and every few seconds, in the energy of his effort, the brother brought his hand down on the man's head and back. The fellow stood it calmly for a while; but, the blows continuing to fall heavily, he got to dodging them, and wobbled out of reach on his knees. The man who was doing the praying had his eyes closed; but, missing the man, he wobbled after him and continued to emphasize his periods on the sinner's back. Finally, winding up his rather long petition for grace, he asked: "How do you feel now, brother?"

"Plum knocked out!" was the reply. "Ef you had any thing agin me, why did you coax me up here ter take it out o' me? Why don't you come outside, like a man, an' give me a fair show? You've knocked the devil out o' me—you have!"

"Thank the Lord for that!" exclaimed the praying brother; "that's exactly what I started out to do. The Lord be praised!"



#### NAUGHTY BOYS AND THEIR DOLLAR-A-POUND HONEY.

I was very much interested in regard to those thieves who were disturbing those bees of yours, as I had a somewhat similar experience in the winter of 1896. In looking over my hives during a warm spell in winter I noticed one that did not seem to have any bees flying. On examining it I found two frames had been taken out of the center of the hive, and all the bees had died. Several days after,

I noticed one morning a red handkerchief lying on the ground. On examining it I found several stings in it. I found another hive disturbed this time, and two of the outside frames gone. This was on a moonlight night this was done, so I concluded by the footprints and other observations that two boys who lived about half a mile away were making the disturbance. So I concluded to watch my hives every moonlight night from 7 until 10, this being the hours when boys usually visit melon-patches; and, having caught the majority of the boys within a mile of my place at one time or another viewing my melons by the light of the moon, I thought of course I could very easily take these boys in the act, knowing their habits so well; but they also had cut their eye-teeth, and took my actions into account. I watched every night except Sabbath evening, when I went to church, came home, and retired. Next morning the first thing that met my sight was a hive tipped over, two combs gone, the queen dead, and bees scattered around everywhere. I followed the boys' footprints part way home, and then concluded I would go and get a search-warrant and search the house and premises for any comb or honey. I swore out a warrant accordingly, and drove up to the house, closely followed by the constable. The first person I met was a boy who, when he saw who his visitors were, became very nervous, and told me he never bothered my bees. This was very good news to me, as I had never told any one that my bees were being disturbed. The constable proceeded to search the house, and I remained outside. He was not able to find any honey or comb in the house; but I happened to look over the garden fence, and spied a piece of brood-comb which the boys had thrown over the fence as they went into the house. This piece of comb had newly laid eggs in it. This was taken to the squire's office, in company with the boys and their father. The boys pleaded guilty, and every thing was arranged lovely. The honey they ate cost about a dollar a pound, which, considering the trouble I had, and the fun the boys had, seemed very satisfactory to all except their loving parent who paid the bill.

Sharpsville, Pa., May 16. JNO. DALLAS.

#### DUCKS AND BEES; NOT A CONGENIAL COMBINATION.

I keep from 150 to 200 ducks all the time, but have to keep up my flock by buying grown ducks, as I found it impossible to raise young ones on account of being killed by bee-stings. The few that I do raise I keep in a brooder-house all the time until they are large. One day last week six ducks, about half grown, got out of the house by accident. About half an hour later one of my children brought in one of these ducks paralyzed. My wife at once looked for and picked out of its throat a bee-sting, and now the duck is much better. My experience is that young ducks nearly always die when stung unless the sting is removed at once; and when they live it stops their growth for a long time. Are my bees



awful cross? This I answer by saying that, if the editor ever visits me, he will have to bring a bee-veil with him, as I have not had one in my apiary for four years. Probably if J. Burr had examined closer he would have found that it was neither lack of shade nor disease that swelled the heads and throats of his ducks.

Rumford, Va., June 6. R. F. RITCHIE.

[Although we have had a number of reports to the effect that bees and ducks do well together, I will never again father the statement, for your testimony is a clincher.

A. I. R. says there is another side to this. In his travels in the South he found that there were instances where the ducks gobbled up so many bees at the entrances of the hives as to make a perceptible decrease in the strength of the colonies. Whether those same ducks had learned the art of crushing the bee before the bee uses its sting, or whether they had cast-iron throats, we can not determine.

Well, now, let us put the statement this way: In some instances bees kill ducks; in others, ducks kill the bees; and in still others, apparently, at least, there is no gobbling and no stinging, but entire harmony.—ED.]

#### A PRY, AND HOW MADE OF A PITCHFORK TINE.

I notice you often speak of the screwdriver as a handy tool in the apiary. The tool we like best is made of the tine of an old pitchfork. About an inch at the point is bent for a hook for pulling out frames, and the other end made wedge-shaped for prying frames apart and prying following boards over to wedge. In fact, it is the one tool we consider indispensable, as it is strong enough to pry off supers, or for any other heavy work.

Our bees are swarming, and working vigorously. We have over 250 stands.

MRS. LUCY C. SLEASE.

Rosewell, New Mex., June 6.

#### HOW TO ENLARGE AN ORDINARY DOVETAIL-ED-HIVE ENTRANCE.

I have for several years enlarged the entrances to my dovetail hives by inserting under each side of the hive (loose bottom-board) a wedge-shaped strip 18 inches long by  $\frac{1}{2}$  inch thick and 1 inch wide, reduced to a thin point at the rear end. This is to be used on the ordinary bottom-board with a  $\frac{3}{8}$  strip. This gives you a  $\frac{7}{8}$  entrance. At close of honey season simply lift the hive at front end and take it out. This gives us a  $\frac{7}{8}$  entrance and only  $\frac{3}{8}$  from bottom-board to brood-frames at the rear. Try it. HAM SMITH.

Ionia, Mich., June 7.

[But you didn't tell whether you found that enlarging the entrance was an advantage. I assume that you do or you wouldn't write about it.—ED.]

#### A POOR SEASON IN OHIO.

If all localities are like this I think your bee-supply boom will soon be over. My bees, like the workers of the United States, are eat-

ing each other, so to speak. I had 12 swarms from the 14th to the 23d of May, since which time I have had nothing but starvation and destruction. My bees have destroyed the drones, to beat any thing ever seen before at this season of the year. White clover, and red too, seem to be quite abundant, but nothing "in it." The same was true of blackberry and raspberry; and even fruit-bloom yielded sparingly. What the final result will be is hard to foretell; but I predict, for this immediate section, failure. If you can get any consolation out of this you can do better than I can. I can sit and see them work, and go to sleep, they work with so little energy. I am going mad thinking about it. Last season I began with 51 moderately strong colonies, and secured 2200 lbs. of honey, and increased to 70 colonies. This spring I commenced with 68 colonies; decreased to 65, and up to date decreased last season's crop of honey 100 lbs., and I fear the worst is not over yet.

Kent, O., June 15.

L. G. REID.

#### NO HONEY.

We are having very cool weather, and but little or no honey this year. My opinion is that thousands of hives of bees will go by the board this year, and feed for stock is very scarce, and losses in this State will be very large.

Murietta, Cal., May 30. C. C. THOMAS.

#### THE U. S. B. K. U. AT OMAHA.

*Editor, Gleanings:—*

After thoroughly considering the matter of the next place for holding the United States Bee-keepers' Union convention, the Executive Committee have decided in favor of Omaha as the place, and probably early in October as the time; but the exact date will doubtless be fixed by those having in charge the securing of reduced railroad rates, and we are going to put the securing of these and hotel rates and place for the convention to meet in, etc., on Bro. E. Whitcomb's shoulders, for they are broad, and he is right on the ground.

A short time ago he sent me some particulars regarding rates, from which I take the following: "Every day during the exposition, tickets will be on sale from all Western Passenger Association territory to Omaha at one and one-third fare for the round trip, except their rates from the following points, which will be as follows: Chicago, \$20; Peoria, \$17; St. Louis, \$17; Denver, \$25. Tickets will be limited to return thirty days from date of sale, not to exceed Nov. 15. From June 1 to October 15 the passenger rates to Omaha from all the principal cities and towns in the United States beyond the Western Passenger Association territory will be 80 per cent of double the first-class fare. Tickets are good to return until Nov. 15, but I'm expecting (?) lower rates, for Bro. Whitcomb told the convention at Buffalo last summer that, if the Union would hold its next meeting at Omaha during the time of holding the Trans-Mississippi Exposition, we should have "as low rates as to

any other place on earth." We know that Bro. Whitcomb will do his "level best" for those who attend the convention, and show us "the sights" on the Exposition grounds.

A prominent Western bee-keeper wrote me a few days ago that "the rate, however, cuts but a very small figure." Well, may be if we poor bee-keepers were all rich, like him, it wouldn't; but this is only another evidence that localities differ.

Further notice of rates, time of meeting, etc., will be given when known.

A. B. MASON, *Sec.*

Sta. B, Toledo, O., June 25.

#### AN APOLOGY; RAISING HIVES OFF BOTTOM-BOARDS TO INCREASE ENTRANCE.

On reading over my article in June 1st GLEANINGS I find I owe an apology to you and Dr. Miller for those unfortunate words, "think so" and "know so." I humbly beg your pardon, and desire to withdraw those words. I had reference to Dr. Miller's statement (which your comments impliedly indorsed) about raising a hive off the bottom board, when a sudden stoppage of the honey-flow had occurred, causing robbing. This is so much at variance with my experience of nearly 35 years, that I thought there must have been some cause which Dr. M. had overlooked, that set robbers going. Certainly locality could have nothing to do with it. Perhaps I did not make my meaning quite clear; but I thought Dr. M., in raising his hives, must have broken some propolis that was recent enough to emit an odor, or in some way disturbed something about the hive that created an unusual odor that attracted the robbers.

I suppose you have had some experience in hunting wild bees, and are aware that, by burning a piece of comb (that containing pollen I believe is best), you can in a short time attract bees even a mile or two on warm days when there is little honey in the flowers. My object was to get you to try raising a hive when there was little or no honey coming from the fields, and thus prove which caused the robbing sight (changed appearance) or the odor emitted. My experience is, where you raise no odor you induce no robbing, provided your bees have not been on a robbing foray. Is this right? He opened up the province; they opened up the way to open up the cavity. Up, seems to me, is a redundancy, and hardly good rhetoric, and fails to make more clear the meaning. Does not "he opened the province" give just as clear an idea of what is done?

E. S. ARWINE.

Dove, Cal., June 13.

[No apology is necessary, for I think we very nearly agree. Our differences of experiences are more apparent than real, through poverty of expression.—ED.]

#### INSERTING COMBS IN SECTIONS.

If, when filling sections with comb (page 353), you will warm the pieces of comb in a tin plate, it will not only save your wax, but the stove and your wife's temper when she comes home.

W. S. FRAZEUR.

Indianapolis, Ind.



*J. D., Mich.*—Some of the brood got chilled during some of the cold nights. As it died, of course the bees carried it out. Without seeing the bees I could assign no other cause.

*W. H. L., Mich.*—1. Milk will not injure bees. 2. It is very seldom that bees will build brace-combs from the bottom of the brood-frame to the bottom of the hive, even when the distance is two or three inches.

*M. T., Ohio.*—I doubt very much whether there would be much of a demand for an implement to ventilate a hive through the top. If at all, ventilation should come from the bottom, through a large entrance.

*H. I., Maine.*—The two causes that usually bring on dysentery are poor food and lack of protection, or both; but generally the matter of protection has more to do with the cause of this disease than any thing else. For further particulars, see the A B C of Bee Culture.

*F. A. M., N. Y.*—I do not think you would have any difficulty in keeping your honey candied if it is kept in a dry place. Usually the problem is how to keep it liquid. Your candied honey may, however, on the approach of warm weather, show a tendency to liquefy; but if it is kept in a cool dry place it ought to keep its condition year after year.

*J. J. G., Mass.*—I see no reason why you can not use the building you refer to, for a house apiary; but of course it would have to be remodeled inside. I would suggest that you construct the interior of the building according to the plan used by F. A. Salisbury, of Syracuse, N. Y., and which is described in this journal for Sept. 1, 1895.

*C. E. S., Pa.*—The telephone for giving notice of a swarm is not now sold by us. You can get it of Montgomery Ward & Co., of Chicago, or Perry Mason & Co., Boston. What you need to call for is the cheap acoustic telephone. They sell them for about a dollar. These phones will answer the purpose of giving signals for swarms, but the wire should be strung around on poles through the apiary. avoid all sharp angles, and draw the wire taut.

*S. E., Pa.*—There is no single article for publication that will tell exactly how to prevent increase when running for honey; but there is a series of editorials on this subject in GLEANINGS, commencing about Jan. 1 of this year. The method that I recommend is, in brief, this: Give the large colonies two stories instead of one. Scatter the frames of brood between frames of foundation or empty combs. This should be done before the approach of the swarming season. In addition, the colonies should be given a large entrance, one inch deep by the width of the hive; and for safety the wings of the queen had better be clipped.





THE Executive Committee of the U. S. B. K. U. have decided to hold the next annual meeting at Omaha, along in the fall. For fuller particulars in regard to this, see Dr. Mason's note in Heads of Grain in this issue.

A FRIEND of mine, in a private letter, gives me this piece of consoling consolation:

I notice you're getting your full share of being misquoted and misunderstood; but let patience have her perfect work. There's an old saying, "Every one must eat his peck of dirt," and there are some other things as well as dirt that one seems destined to have his full quota of.

WE have just received a line from George E. Hilton, that hustling bee-keeper of Michigan who is running a series of out-apiaries, saying, "My men report the plain sections a success." M. H. writes: "I have just taken off some of the new plain sections, and they are a success, sure—well filled—not too full."

We shall be glad to hear from others regarding the success or failure of these old new things. The probabilities are that some will not like them, while others will be very enthusiastic over them.

#### FAIR DISCUSSION.

A LITTLE private correspondence has taken place between Mr. Hutchinson, of the *Review*, and myself, on the matter of contraction, as discussed in this issue. Bro. H. winds up his letter in this fashion:

If there is any man in the world with whom I should delight to have a good square argument, it is yourself. I think we both intend to be perfectly fair, and try to be unprejudiced, and we have great opportunities to see all sides of a subject, and to fairly understand what we are talking about.

Yours truly,

W. Z. HUTCHINSON.

That is just exactly the way I feel, friend H., toward you. As long as such a spirit prevails, nothing but truth can result from such a discussion. Strict fairness compels me to say that I want to be willing to take back any thing I say, just as soon as I am convinced I am wrong. Such a position, far from being a weakness, should be an element of strength in one's character, and I know Bro. H. feels the same way. Before we get through it all, I presume it will be seen that both of us are right, to a great extent, and that the truth lies somewhere between us.

#### TWO PROPOSITIONS; STRONG COLONIES, AND THE BEST WAY TO GET THEM.

MR. R. L. TAYLOR, of Michigan, although differing on some points with me, agrees on this; namely, that strong colonies are a desideratum; and we differ as to the *method* of securing them. Mr. Taylor believes that he can secure strong colonies in *one* brood-nest of about eight-frame capacity, by so manipulating that that brood-nest shall be full of brood.

My position is, that the *average* bee-keeper will get stronger and better-working colonies in *two* eight-frame brood-nests than in one. It is very possible that Mr. Taylor and others know how to get jumbo colonies out of single eight-frame brood-nests. If so, I hope they will tell just how they do it. By this I do not fling a challenge into Mr. T.'s face that he can not tell how it is done. Personally I should like to see this matter thoroughly discussed. If I could make one brood-nest do the work of two, no one would be more enthusiastic than I. I hope the brethren will discuss this question, as it is a live one; that is, from my point of view it means dollars and dollars to the bee-keeper.

#### CONTRACTION—THE RIGHT AND WRONG KIND; MR. HUTCHINSON'S AND MR. TAYLOR'S CRITICISMS; LARGE HIVES, OR DOUBLE-DECKERS.

IN several issues, of late, it will be remembered I have had much to say upon the value of two-story colonies as against one-story; that the former would not only secure more honey, either comb or extracted, but were very much less inclined to swarm. On page 358 of our issue for May 1 I had something more to say on this same line. After referring to the case of the Dadants with their large hives, and to others, I spoke of contraction as a "fad," and that, some eight or nine years ago, it was all the rage; but as it seemed to result in an excess of swarming we were hearing less of it. Unfortunately I referred to the light crops Michigan bee-keepers had been having, and in that connection stated that contraction was more extensively used in Michigan than in any other State. This last statement seems almost to have had the effect of a red rag before a bull; for brothers Hutchinson and Taylor, in dissenting from some of my positions, have taken nearly nine columns to my two. In the first place, let me state that I had no intention of poking fun at the leaders of the Michigan bee-keepers; neither did I have them particularly in mind. Moreover, I did not mean to imply that contraction, however much it might have been practiced in Michigan, was wholly responsible for the light crops in that State, because I well knew that Michigan, like other States, has been having poor seasons. In evidence of this, read my last paragraph on page 358.

Bro. Hutchinson winds up by saying, "It matters little which of us, Bro. Root or myself, is right, if only we get at the truth." Just so. With such a fair understanding I will assume that there will be and can be no animosities. If any thing, there will be only honest differences. Well, then, in this fraternal spirit which has always existed between the *Review* and GLEANINGS, and which always shall exist, I trust, let us consider some of the points raised by Bro. Hutchinson and by Bro. Taylor. Mr. Hutchinson says it is evident I have "misunderstood the time and manner in which contraction of the brood-nest has been practiced;" and then he adds:

Bro. Root, so far as I know, no none has practiced contraction of old established colonies—those that had

their brood-nests filled with bees, brood, and honey—it was only in hiving swarms that contraction was practiced. It is possible that some practiced contraction with established colonies; it seems that you have understood it that way, but you are the first man I have ever met who so understood it or practiced it.

In a letter just received from Dr. Miller he writes:

*Mr. Editor.*—Referring to what you have said about contraction, and what Bro. Hutchinson says in *Review*, page 179, it is evident that there is considerable misunderstanding. You are talking about one kind of contraction, he of another. You are wrong if you think all contraction applies to established colonies with no swarming in the case, and he is just as clearly wrong when he says, "Brother Root, so far as I know, no one has practiced contraction of old established colonies—those that had their brood-nests filled with bees, brood, and honey; it was only in hiving swarms that contraction was practiced." In a book entitled "A Year among the Bees," among other foolish things I find this, which is on page 49: "Up to the time of putting on supers, the desire has been to have the bees occupy as many combs as possible. . . . When it comes time to put on supers they are reduced to four or five frames." And I supposed that in general that was the kind of contraction that was practiced. After you've talked it over together I think you'll not be far apart in your views.

To-day I have received from Medina *L'Abeille*, a Belgian bee-journal (in the French language), and I return inclosed a part of it. Look at page 123. Under the item "Sections," after saying that supers of sections are over the brood-nest of populous colonies, the underlined words read: "In order to force the bees to occupy them immediately, it is advisable to limit at the same time the space which the colony occupies to about two-thirds of its capacity. If this practice brings the colony to the swarming-point, the swarm is put upon a few frames."

You see, there's contraction both of the full colony and the swarm, given in a journal for June, 1898, in its regular department of instruction for the care of the apiary in that month. *Maingo, Ill., June 14.*

When I wrote, I well knew there were two—yes, three—kinds of contraction—one practiced before the swarm and at the beginning of the honey-flow, (2) another after the swarm, and (3) still another in the fall, when preparing for winter quarters. My remarks, as Mr. Hutchinson sees, apply to the first named, because I thought it was almost exclusively practiced. I may have been wrong in my assumption; if so, Mr. Hutchinson is just as surely wrong in assuming that the second method of contraction was the only one practiced.

In addition to the fact that Dr. C. C. Miller practiced and recommended in his book contraction at the beginning of the honey harvest, and before the swarm, there are a good many others who practiced and recommended the same thing. If Mr. Hutchinson will turn to "Langstroth Revised" and to the A B C of Bee Culture he will find under "Contraction" the same kind that Dr. Miller refers to. If the A B C with its nearly 65,000 copies sold, has any influence with the fraternity, it is patent that a very large number would practice the very form of contraction that I was condemning. I have not time here to give references, but I have consulted the back volumes of the *Review*, the *American Bee Journal*, and *GLEANINGS*. The more I went over the references, the more I was convinced that contraction, when practiced at all, was usually of the kind that takes place at the beginning of the harvest. I did find, however, that more practiced contraction at the time of hiving swarms than I was aware of.

In the *Review* for 1890, page 63, Mr. Martin, in his second paragraph, in speaking against contraction, says: "Contract the brood-nest, and, in our experience, swarming will result." On page 214 of the *Review*, same year, C. W. Dayton tells how he contracts the brood-nest of an established colony by means of perforated zinc. On page 51, 1891, Dr. Tinker says: "We must contract the brood-nest, both during the honey-flow and during the rest of the season." The editor of the *Review*, in commenting on this, says he has seldom found it necessary to contract the brood-nest of an established colony. On page 164 of the *Review* for 1893, R. L. Taylor says, referring to the Heddon hive: "Every colony is confined, either to one or two sections of the hive, which in either case is substantially full of brood about the 20th of June." This I take to be contraction before the swarming season; but from other writings of Mr. Taylor I take it that he practices both kinds of contraction.

So on I might multiply references, both from *GLEANINGS* and the *American Bee Journal*, both pretty much to the same effect. I will be frank about it, and state that there are some who practice or did practice contraction at the time of hiving swarms. Among the list that I remember are J. A. Green, G. M. Doolittle, W. Z. Hutchinson, R. L. Taylor, and James Heddon; also J. Oatman.

The kind of contraction that I referred to as having been abandoned, and which I condemned as resulting in swarming, was that which was practiced at the beginning of the honey-harvest; and it is true that it has been almost entirely abandoned, I believe; and even the other kind of contraction that friend Hutchinson recommends, if I remember correctly, has also been given up in some instances. I think I could find quite a number of even these; but as it may take hours and even days to hunt them up, I will give only two that I ran across in the first volume of the *American Bee Journal* that I picked up. On page 9 of that volume for 1889, C. A. Bunch writes: "It seems that the bees in Indiana act differently from what they do in Michigan."

I hived sometimes on five Langstroth frames with mostly half-inch foundation starters. . . . The bees began to swarm, and at one time four of these swarms came out at once. . . . The only way to get out of such a dilemma was to give the bees room for eight brood-frames, which I did, and after that scarcely a swarm issued." Again, on page 217, same year, S. H. Hovis says: "I put the swarms on six frames; . . . in return for my care and trouble I expected the supers filled with nice honey in one-pound sections; but, alas! I was disappointed. Not one gave me a pound of surplus, while those in box hives had the pleasure of taking care of themselves, and gave me some surplus. . . . With these results I took in the situation, and I said to the contraction theory, 'Get thee hence.'"

Now, in opposition to this I will add that I received a letter some little time ago, and which I believe I published, referring to what I wrote on the contraction fad, saying the writer had practiced the method as advocated



by W. Z. Hutchinson; was using it then, and expected to continue using it. As I said at the outset, we desire to get at the truth; and as it matters not who is right, Bro. H. or myself, I desire reports from bee-keepers, both for and against contraction at the time of hiving swarms.

Brothers Hutchinson and Taylor may prefer to use small brood-chambers and practice contraction because their locality best favors that system, yet I recall to mind a bee-keeper, N. E. Doane, of Brecksville, Mich., not forty miles from either. He believes in large colonies, and to that end uses twelve frame hives. He claims for them, I think, that he has strong colonies, very little swarming, and very much more honey. There are others not far away who use large hives. H. S. Wheeler, of Mt. Pleasant, Mich.; John Morrison, of the same place, and J. N. Harris, of St. Louis, Mich., are other names given by our Mr. Boyden. Would it not pay Bro. Hutchinson to call upon friend Doane and some of these others, and see whether their locality is essentially different from that of Flint?

Near the close of his article, Mr. Hutchinson, referring to what I have said regarding the use of two-story colonies for comb honey, says: "Suppose, brother Ernest, that you try a few colonies with two or more stories for brood-nest, in working for comb honey, and see what it will cost you." My, oh my! Bro. H. This is no theory of mine, for I have tried it at our out-yard, and the results showed decidedly more honey than I could get from single eight-frame colonies; this I have reported in these columns; but, as I have said, I practice two methods. If the colony is very strong I let them have the two stories clear through the season. If they are of medium strength I take away one of the stories and give them the same room in supers with section honey-boxes.

But I do not depend for my facts upon our out-yard, or home yard either, for that matter. In my travels among the bee-keepers whom I meet every summer I can not help seeing some things, and one of the things that made an impression on my mind was that these big "guns" almost universally run big colonies, either in large single stories or on the double-decker idea.

R. L. TAYLOR'S CRITICISMS ON THE EDITOR'S  
ADVOCACY OF TWO-STORY LANGSTROTH  
HIVES FOR COMB AND EXTRACT-  
ED HONEY.

On page 182 of the *Bee-keepers' Review* for June Mr. Taylor has (unwittingly, I believe) made me father certain sentiments that I do not and did not believe in, or, more correctly speaking, he has taken certain propositions of mine, altered them slightly, and then pokes fun at them. He quotes me, for instance, as believing that the best solution of the swarming problem is big colonies in two-story Langstroth hives. So far so good; but he reports me as saying that the "two and three story colonies do not swarm." I may have given an unequivocal statement to that effect, but I think not. I have been careful in all that I have said on this question to qualify

the point by saying that such colonies were not as *apt* to, or were less *inclined* to swarm. Indeed, in the very article he refers to, and which he criticises, I said there would be "less swarming."

Still again he says, in referring to what I have said regarding large colonies in two-story hives, "It is evident that the editor would have us believe that in some occult way those extra stories add to the numerical strength of the colonies." Now, Bro. Taylor, how could you read so much between the lines? Such a proposition is ridiculous. I might just as well try to claim that big shoes make big feet. I do believe, however, that, in the *hands of the average bee-keeper*, big rousting colonies can not develop properly in a single-story eight-frame hive, in the same way that I believe that the boy's predisposed big feet can not develop in small shoes.

It may be possible for *you* to have as much brood in one eight-frame brood-nest as two. I believe I *could* do it myself by reversing, and by wasting a great deal of time. But in saying this I do not mean to insinuate that you can not do it, either by a long or by a short process.

A neighbor of ours, Mr. George Carrington, who lives about five miles from here, obtained of us a few twelve-frame hives. He already had in his apiary quite a number of eight-framers. A few days ago he told me, quite incidentally, that the small brood-nest was altogether too small for him; that his twelve-frame colonies were rousting big ones, while his eight-frame stock seemed to be limited to the capacity of the hive. Mr. C. does not profess to be an up-to-date bee-keeper. He grows small fruit, and he says he must have a system of management by which he can expend as little labor as possible on his bees, because he desires to give most of his time to his farm and fruit. He gave it as his opinion that twelve-frame colonies or two eight-framers, one above the other, was the kind he wanted for honey.

Mr. Taylor thinks I practice contraction after all, because I sometimes remove the upper story of a two-story colony, and put in its place supers of equal capacity to sections. I do not exactly see that this is a case of contraction so much as it is a case of substitution; but call it what you may. When the colonies are not strong enough, or if the upper set of combs are well filled with honey and brood, I put on comb-honey supers. In fact, I do just as Mr. Taylor does—adapt the management of the colony to its particular needs.

Once more. Mr. Taylor seems to be a little doubtful of what I mean when I say that, in our experience at least, they, the double-deckers, would get more honey, both comb and extracted, than the smaller ones. He seems to feel that I mean *either* comb or extracted. I meant just what I said. Some of our double-deckers are run for extracted and comb honey, *both at the same time*. Off from one of them last season I remember distinctly of taking one eight-frame super of *extracting*-combs well capped over, and two *comb-honey* supers equally well capped. I do not see why

we must necessarily make a colony run for *either* when it may be more convenient at times to make it produce *both*.

I am not sure that Mr. Taylor and I are so very far apart on many things. If we could "talk it over" we would see some things in the same light. Very likely if I were in his locality I would do exactly as he does. But I feel very sure of one thing; and that is, he has not read carefully all that I have said for the last year or so on the subject of large colonies and the swarming problem.

#### THE HONEY SEASON; A SCANT CROP; HIGHER PRICES.

Up to within a few days, at least, the honey season as reported over the country has been very indifferent, not to say poor. We have, up to within a day or two, received only a very few reports where honey was coming in to any extent; but these few report an extra honey-flow; but the localities are so scattered that, if no honey should come from now on, there will be a great scarcity of both comb and extracted honey; for in California the season has been almost a complete failure. I think I have never seen such immense areas of clover as I have this year; but for some reason or other it does not seem to "give down." Occasionally, here and there, there will be a few bees, but nothing like what we might expect if nectar were being secreted in the usual way. Our colonies at the home yard and at the basswood yard have been on the verge of starvation, and have had to be fed in order to keep brood-rearing going. Our neighbors report a similar condition with one exception, and to this exception I shall refer later on.

But since June 26th I can report for this locality, at least, a change for the better. Basswoods were never more promising than this year; and by the way the bees are roaring on the trees, and tumbling in at the entrances, it begins to make it look as if we *might* get our usual quota of honey. But the season has been so peculiar that we do not propose to count our chickens before they are hatched. But as I sit here I can see great droves of bees flying past the window and over factory buildings; and our men in the yards tell us that it begins to look like business now.

In the last few days we have received some very encouraging reports. In some cases clover seemed to be the source, and others basswood. Rains have been frequent, and copious at times; and although clover has been out some six weeks, there are still vast areas of it on the hills and pasture lands. Perhaps we shall have a second crop. An immense quantity of clover will go to seed this year, and this augurs well for next season's clover.

I have deferred the writing of this till the very last minute, so that I might be able to present to you as exact an idea of the situation as possible. Taking every thing into consideration, honey ought not to sell as low as it did last season; for I am morally sure that there will be less of it; and do not be in a hurry to rush it off to the commission men, even if you do get a little crop. As the output will be limited, prices should rule higher.

White clover, at least in the Northern and Middle States, is the main dependence for honey; and even though basswood may yield well it is confined mainly to particular localities, and would not, therefore, greatly affect the general market. In our next issue I hope to give a more exact estimate of the season.

#### GETTING HONEY WHEN OTHERS DO NOT; THE BOARDMAN PLAN OF FEEDING.

CHALON FOWLS, of Oberlin, who called upon us lately, and who, at the time of his visit, reported no honey, on his way back home called on Vernon Burt, a bee-keeper who needs no introduction to our readers. This is what he wrote back:

*Friend Ernest:*—We stopped at Mr. Burt's on the way home, and saw some sections nearly completed. It was a stunner. He insinuated that your bees were not the right kind, or you didn't know the ropes, or something.

CHALON FOWLS.

Oberlin, O., June 24.

I had not time to go over and investigate for myself, but I got Mr. Weed to go in my place. The secret of it is this: Mr. Burt probably had no more nectar in the fields to draw from than we; but he had been feeding his bees sugar syrup *a la* Boardman until the brood-nests were *full*. As his bees had a big stock of this in reserve, they did not draw on what nectar they *did* gather from the fields for brood-rearing; but it went right into the supers. I might have known Mr. Burt would have been forehanded.

Right here, friends, is a pointer. A bee-keeper who takes advantage of good and poor seasons, and can somehow manage to get honey every year, is the chap to pattern after. I am planning to go and see him in a day or so. Mr. Weed says Mr. Burt is using deep and wide entrances, and other fancy notions.

#### EXPERIMENTS WITH THE NATURAL-BASE DRAWN FOUNDATION.

It has been unfavorable to test the new product. But, judging from one colony we have been feeding, it would appear that drawn foundation with walls *more* than  $\frac{1}{8}$  inch will not give as friable and delicate a comb as that which is  $\frac{1}{8}$  inch deep or less; that is to say, when walls are deeper than  $\frac{1}{8}$  inch, the bees do not thin them down to walls of natural thickness. So far, also, tests go to show that drawn foundation having walls  $\frac{1}{8}$  inch deep, and with natural bases, is taken by the bees in preference to ordinary foundation, in every instance.

Perhaps some may think that a dollar a pound for foundation is rather expensive. So it is, but it is in the experimental stage. Even at a dollar a pound it is not too expensive to use as starters one inch deep, top and bottom; that is to say, it costs no more than ordinary foundation in full sheets, and I am of the opinion it will be better bait for the bees—far better. However, we solicit tests of it in full sheets so that we can determine whether it will be advisable to make larger dies whereby we can reduce the cost of drawn foundation so that it will be within the reach of bee-keepers.





Do good and lend, hoping for nothing again.—LUKE 6:36.

I have told you how, every little while, my life is brightened by getting a new glimpse of some beautiful text that makes it shine out like a new planet in the heavens. For two days past I have been rejoicing over the little text at the head of this talk. Now, this text, like the one quoted in my last, is not nature—at least, not *human* nature. In fact, it is directly contrary to the *natural* man.

We have had several talks on these pages in regard to lending tools, and I still think it is a bad practice—that is, from one point of view; but the man who would shut up the door of his toolhouse, and say that he was neither going to borrow nor lend *under any circumstances*—well, such a man might prosper, but I do not think he would be a happy man. On second thought I do not believe he would prosper, after all, in the best sense of the word; for somehow or other our relations are such in these lives we are living that it is *worth* a great deal to have the sympathy and love and respect of our fellow-man. I shall have something to say about lending and borrowing tools further on; but I want to tell you first what made this little text come out so strong and bright and grand.

Let me begin by saying that GLEANINGS was started and built up to a circulation of something like ten thousand by my own humble efforts—or, at least, principally my own. When I started I felt a sort of relationship to everybody who loved the honey-bees; and I naturally wanted everybody to take and read GLEANINGS. Of course, I wanted them to subscribe and pay for it; but this latter was a rather secondary matter. After the Home Papers were started I felt doubly anxious that every one should read GLEANINGS who cared to read it, for I felt then that I had a more wonderful story to tell about “Jesus and his love” than even the stories about the wonders of the hive. Some of the older ones will remember when I said I would send it to all missionaries free of charge, and pay postage myself, provided they cared enough for it to read it. At the time I did this I did not think—in fact, it did not occur to me—that it might open up business in foreign lands.

Well, while the subscription-list of GLEANINGS was immediately under my control I was always very liberal with subscribers. We would continue sending the paper, as you may know, without orders. But when we sent it without orders, and the recipient objected to paying, I have often told him that, if it were worth nothing to him during the time it was sent without being ordered, there would be nothing to pay; and I have always been glad to see GLEANINGS started in any new community or neighborhood, or in a new family. For this reason we have always kept it going, at least for a short time, even if no

money was received. Objections have been made by our people here to putting the name in type, and giving it a place in the regular list before any money at all was received. But I have always urged adherence to my original plan, not only because it might help to advertise our bee-hives, but because it would give me an opportunity of explaining to some person the meaning of these glorious little texts like the one we have to-day—“Do good and lend, hoping for nothing again.”

Yesterday a man wrote me that a swarm of bees came to his place unexpectedly, and in order to get a hive he went to a neighbor who kept bees. He got a hive and some other things, and along with them some old copies of GLEANINGS, dated away back in the late '70's or early '80's. He said in his letter something like this: “Mr. Root, if you are not dead when this reaches you, and if you are still writing the Home Papers, I want to subscribe for your journal.” I need not tell you that, along through the years that are past, quite a few have been led to make these scripture texts a part of their very lives by reading my little “sermons” as some are pleased to call them. So much for a preface. Now read the card below:

*Mr. A. I. Root:*—I sent you a letter inclosing \$1.00 for GLEANINGS to be sent to J. O. Mattoyaw, Mansfield. If you have not received it, please let me know.  
Savannah, O., June 15. F. P. HILL.

When the above postal came to our office I did not see it at all. It was turned over to the subscription clerk—that is, after diligent search had been made and we were satisfied that the money never reached us. If I had gotten hold of the transaction, however, I would have started GLEANINGS to our new friend the very first thing I did, and taken my chances of getting the dollar or any part of it. The clerk, however, wrote him that we did not get the money, and asked for further particulars, but did not start GLEANINGS at all. In due time came a second postal as follows:

*Mr. Root:*—I gave a letter to our hack-man, just as he was starting for New London, containing \$1.00 for subscription to GLEANINGS for J. O. Mattoyaw, Mansfield. Please send at once, and I will send you the money if not found.  
Savannah, O., June 20. F. P. HILL.

Well, I did not see this either, but I chanced to see the reply. It was to the effect that we could not put Mr Mattoyaw's name on our list until we had received some money. When I saw this reply I remonstrated. I said that GLEANINGS must be started at once, even if we never got any thing. I was then told that a recent decision had been made in our office to the effect that no name was to be put in type until some money had been received. I remonstrated again. I appealed to the heads of the proper department, and objected to the ruling that changed my time-honored custom. One reason given for the new ruling, and a very good reason too, I must admit, was that our ledger accounts were getting to be so exceedingly numerous, especially with parties comparatively unknown, that the book-keepers had petitioned that we would not open accounts unless some money was received. I said all right so far as ordinary merchandise

was concerned, but urged that GLEANINGS was a different matter, and that we could afford to be liberal in giving instruction, even in bee culture. I said it was like casting bread upon the waters.

Now, I felt a little diffident, as you may naturally suppose I would, in urging that one reason why I wanted GLEANINGS to go into just as many homes as possible was that I wanted the privilege of *pleading* for the kingdom of God and his righteousness. I wanted the privilege of doing this without money and without pay. We have received pay for the part of GLEANINGS that teaches bee culture, and, if you choose, gardening, education in general, etc.; but my special department right here in this place, that I have occupied so long, I wish to publish without money and without price. I would have it in a separate sheet by itself; but it is so connected and interwoven with business generally that it can not very well be separated. I urged my point, and pleaded vehemently to be allowed to send GLEANINGS whenever anybody asked for it, and stop it only when they neglect to pay after being notified it would stop. I do not know yet whether I carried my point or not, but I think I did. Somebody was calling for me, and I hurried away; but my soul had been stirred within me, and I was groping in the dark for some scripture text to make it plainer to my partners in business just how I felt in the matter. I stopped. "Cast thy bread upon the waters." But that did not quite touch the spot. As I was hurrying along, something whispered over my shoulder a word of encouragement. Do you know that that old teacher Paul might have lost heart sometimes had it not been for the cheering and encouraging words from that great and all-powerful but invisible friend of his? Well, the words I heard were these: "Do good and lend, hoping for nothing again." I said to myself, "Why, did you ever? Is not *that* the thought exactly?" Then I kept fondly and lovingly saying them over to myself—"Do good and lend, *hoping for nothing again*;" and from that time to this I have turned with comfort and joy and *enthusiasm* to those eight little words so beautiful, so expressive. Why! I should like to march in a procession, and I would have a flag at the head of that procession, and these words should be inscribed on the banner:

DO GOOD AND LEND, HOPING FOR NOTHING AGAIN.

Dear friends, I can almost hear some of you saying, "Mr. Root, that is all very pretty to talk about; but if you lived in *our* neighborhood you would get enough of it when you went to put it into practice yourself." Do you think, dear brother, I do *not* live in "your neighborhood?" Listen:

Yesterday, June 22, we finished planting our potatoes. As there was nothing more for the double team to do after covering the last row, we separated the team and prepared to do the cultivating that was very much needed. Mr. B. told me, however, that the very cultivator we wanted had been taken out of the barn Monday, and had not been seen since.

He asked me if I had not loaned it. I said I had not. I spent almost half an hour making inquiries for that cultivator. Finally I was obliged to set the horse at some other work or let him stand still in his stall because the cultivator could not be found. Somebody had borrowed it without permission, and then had kept it three or four days right during cultivating time. There were some new cultivators in the warehouse that had never been used. I was so vexed I declared I would hitch right on to one of the new cultivators in the warehouse, and tell the neighbor who borrowed the old one, when he came back with it—that is, if he ever did come back—that he had annoyed me so much he could take the old cultivator at a fair price and keep it or take the new one, just as he chose. Yes, this was after I had had a glimpse of that beautiful text. So my text was not in my mind *all* the time, after all. I thought of it pretty soon, however, and for a little time there was a battle between self and the text; but the text came out ahead. Some time after dark the man who took the cultivator without leave heard that I was scolding about it, and brought it home in a hurry. He had it a year ago by permission. This time he saw it standing in the barn, nobody using it, and he took it *without* permission, and lent it to his "brother-in-law," telling him to be sure to take it straight back just as soon as he got his garden done. Either his brother-in-law did not understand, or else his enthusiasm for keeping his promises dwindled away; so he let my cultivator stand right where he used it until I had made sufficient fuss so that somebody heard of it. When I saw the neighbor who took it I told him it was a pretty serious matter to take tools out of a man's barn, without *any sort of permission*, or without notifying anybody on the premises of what he had done; but that it was still more serious to let a tool under such circumstances drop where it was used last, or to intrust to somebody else the uncertainty of putting it back. He admitted his fault, and made a very humble apology. Now, I do not believe in letting people run over us and annoy us in that sort of way. It would not be Christianlike to do things in such a slipshod fashion; but, notwithstanding, I still hold on (and *rejoice*) in repeating over and over my beautiful text.

Some years ago a friend of mine was showing me over their handsome cemetery. He pointed to a beautiful monument, and said, "Mr. Root, that man was one of the finest horsemen in our county. He owned some of the very best horses—some whose value was away up in the thousands. He had the finest barn, and a beautiful farm. He was successful in every thing, and well-to-do; and yet he committed *suicide*." Now, I knew something of this man. He succeeded, if I am correct, because he did not lend any thing. I do not think *he* was annoyed by his neighbors borrowing tools, especially without permission. They knew better; but yet he was not happy. Do you believe a man would feel happy and satisfied after having had a sign painted and



put over his toolhouse, "Do not touch these tools—I neither borrow nor lend"? It is true, he might escape some of the annoyances that you and I have (I guess that is right, dear brother, is it not?) but he does not enjoy life. He never feels like swinging his hat and giving a big boyish hurrah out of the exuberance of his spirits because he has found such a text as I have found. By the way, do you ever hear of anybody committing suicide because he was so clever and accommodating, and always helping other people? Far from it.

Sometimes people do good and lend, mostly from motives of policy. They take a sudden streak—that is, when they are candidates for office, or when you commence trading at their store, or something of that sort. But that is not according to the Savior's teaching. Notice the last clause—"hoping for nothing again." You are to do these things because you love humanity. You are not to consider whether it will pay or not. If people are in trouble, if you are a Christian you will enjoy helping them out of trouble. In great cities folks have a fashion of paying no attention whatever to what is going on, providing the "going on" does not bump them or hinder them in any way. Such people do not often see others who are in trouble. Sometimes I have thought that this ignoring of others was getting to be a fashion in the country. God forbid!

Then there is another part to this beautiful little text. In that wonderful closing part of the 25th chapter of Matthew, Jesus says, "Inasmuch as ye have done it unto one of the least of these." Now, when you "do good and lend, hoping for nothing again," with the proper spirit in your hearts, letting reason and common sense guide you (as a matter of course), you are doing good to *Christ Jesus himself*. Yes, you are really "lending unto the Lord."

Let us now go back to the second of the two cards I have quoted. The man who wanted us to send GLEANINGS had evidently received a dollar from some friend or acquaintance. He had been requested to send the dollar to us. The dollar is lost. Now, suppose The A. I. Root Co. had held him down to the new ruling, and told him that GLEANINGS would not be sent to anybody unless the money was paid over first. I am afraid that, under the circumstances, friend Hill would have lost faith in humanity. He might have said, "If this is the way the world goes, I do not think I shall try to accommodate people any more." You see, this man was really acting as agent for us—in fact, was helping to extend the circulation of GLEANINGS, and should have had a commission for so doing; but had I not interfered I am afraid he would not have had even a word of thanks or not even words of sympathy for the lost money. This illustrates quite vividly the difficulty of making rules that will fit all sorts of cases. The clerk in charge of the subscription department—in fact, a clerk who has charge of any department—should have discretionary power to "do good and lend," whenever it seems to him it is the right and proper thing to do for the general

welfare and prosperity of the business. Every one who is employed in any sort of business ought to have, above all things, a kindly and generous feeling toward his fellow-men. He ought to be anxious, not only to be just, but he ought to have authority to be generous, especially in cases like the one given above.

It is a pretty hard matter, too, after you have consented to do a favor for a neighbor by sending his dollar to headquarters, to know, when the money is lost, that *you* have got to stand the loss. Of course, the dollar may be recovered. I wrote our friend that, in case it could not be found, he might send us fifty cents if he thought proper, and we would stand the rest of the loss. Notice, he offered to send the money over again in case it is not found. Perhaps it may be well right here to say that there has been a good deal of trouble during the past year on account of loss of money sent in a letter, and a good many times there have been hard feelings. Some will add, "Oh! I guess the money got to your office all right. If you would overhaul your clerks, or open the letters containing money *yourself*, I think there would be no trouble." We have had a few such letters, but not many of them. So many more of them have been of the other kind that my little text shines out sharp and clear. This is not only a *happy* way of getting along in the world, but it is really the most profitable way to do business. When my attention was first so strongly directed to that little text, "Love ye your enemies, do good to them that hate you," I said, "Those words came from heaven and not from earth." I said they were not man's words, but that they were the utterances of divinity; and I say again, dear brother and sister, that, even though good business men do tell you that the best way is to neither borrow nor lend, the words I have emphasized so strongly to-day are words *divine* and not human.



Just as soon as our last strawberries were picked we commenced plowing them under for potatoes. And, by the way, I learned by the Weather Bureau crop reports that it is now getting to be quite customary to follow strawberries with potatoes. A few years ago people expressed surprise when I told them I could get nice potatoes when put in as late as after strawberry-picking was over. If we have a dry time as the strawberry season winds up, it is hard on berries; and, as a general thing, it is a somewhat difficult thing to work the ground. Upon the hill by the windmill it took us a good while to plow and fit the ground, and do it right; but down by the creek-bottom, on that piece where everybody told me I was wasting my money ten years ago in trying to fit it for crops, the ground just worked up beautifully; and, by the way, that piece al-

ways does give us a big crop of almost every thing we put on it. The potatoes were got in in splendid order. They were Manum's Enormous. One reason why these happened to be kept until the last was because they were the last to sprout and wilt. The boys said, when they were cutting them up, that they were just as sound and crisp as when they were put into the cellar in the fall. This is a big-point in favor of Manum's Enormous. Will it have time to give us a good crop if planted as late as the last week in June? We shall see.

I am glad to tell you we have *once more* an excellent stand of crimson clover. This year we waited for rain so long that I was really afraid some of the clover seed would sprout unless it was put down in the ground too deep to germinate. There was such a quantity of crimson clover and timothy and other stuff that it was with very great difficulty we got it out of sight. In fact, I had an extra man follow the plow, to stamp the grass down under, and to turn the sods over so the roller and Acme harrow would cover up all the green stuff. When we came to planting, any thing besides the furrower and marker with its revolving steel disks would have pulled the green stuff all up on top of the ground. With this machine, however, using the same thing for a coverer, we got the seed in in pretty good shape. This tool, however, leaves a ridge of mellow dirt over the potatoes, and a furrow between the rows. Now, as we wish to scrape off the top, and fill up these furrows with the Meeker smoothing-harrow, we run the latter over the ground several days after planting, and after a rain if possible, so that the weeds may get a little start, and just before the potatoes are coming through the ground. If the smoothing-harrow scrapes the tops of some of them we do not mind it, for we think that, in the end, it does such a great amount of work so cheaply that we can stand a little harm to an occasional enterprising potato.

On my wheelrides through the country I have noticed of late a good many farmers *rolling* the potato-ground just as the potatoes were coming through. Well, there was so much trash where we turned the crimson clover under I feared that even the smoothing-harrow would roll the sods up after we had taken so much pains to get them down in good shape; so we have for this season used the roller to level off the ground. Just at the right time after a shower we propose to run the weeder lightly over the ground so as to break up the slight crust produced by the weight of the roller. By the way, the roller is a pretty good thing to smash bugs, especially when they commence on your potatoes just as they are coming through the ground. A rolling heavy enough to kill the bugs does not seem to do the potatoes very much harm, especially if they have a refreshing shower shortly after the rolling. By the way, the bugs are not nearly as bad this season, with us. I don't know whether it is because we gave them such a terrible routing last season or whether it is because this season is not a good one for bugs. It is a satisfaction, anyway, to have the upper hand of them.

By the way, the little 75-cent sprayer that I pictured on page 369 suits me better for man-aging potatoes, especially when there are not very many of them, than any thing else I have ever gotten hold of. In fact, our four and five dollar dusters have been used scarcely at all this season. One of our small boys has some Paris green in spoonful packets done up in his vest pocket. When his cup is empty he puts in another packet of Paris green, fills the cup with water, and goes ahead. One push of the plunger, held at the right distance from the potato-hill, fixes the bugs.

By the way, our early potatoes are all looking so exceedingly well that it is hard for me to say which variety looks best. They are on that creek-bottom ground, and the greater part are now in blossom. Red Triumph has potatoes already as large as hens' eggs, and I am inclined to think it is still going to head the list of extra-early potatoes here in the United States as it does in Bermuda. Right in the same plot we have the new Bovee, Early Andes, Early Zehr, New Queen, and, in fact, almost all that have been advertised as being remarkable for earliness and yield. The blight has not as yet struck them, or not enough to do them any harm; but I am watching anxiously, fearing it may come at any time all of a sudden. I have not yet used the Bordeaux mixture to ward off the blight. The results of the experiments in Bermuda were so varied that I have not been really satisfied it is a preventive; and yet the results of the experiments at Cornell would seem to be almost conclusive. Our potatoes that were affected by scab have all been treated with the corrosive-sublimate solution this year. In this matter of scab there are many perplexing things. Last year one of our men in the machine-shop purchased at a low price the worst lot of scabby potatoes, almost, I ever saw. It was late in the season. Our others were all disposed of. He took them home and planted them, and when it came time to dig he was greatly astonished to find a crop of clean nice handsome potatoes—not a scabby one in the whole lot. They were put in ordinary garden soil where potatoes and other things had been grown for years. Of course, this does not prove any thing unless it is that scabby seed does not *always*, at least, produce scabby potatoes.



#### ELECTROPOISE AND OXYDONOR OUTDONE.

*Friend Root:*—I see you have been giving those electric frauds a write-up (on the wrong side for them) in GLEANINGS for the past few years. We have one in our midst that I wish to tell you about, and should be pleased to have you publish, with comments on same.

This man is located in the beautiful little town of San Saba, in San Saba Co., Texas. He is not selling electric belts, rings, etc., but claims to have so much electricity about him that he can cure most diseases the human family is subject to by just rubbing his fingers over their clothing, near the affected parts, and in some cases by just holding his hand near them for



a minute, not even touching the patient; and if it is a bad case he dips his fingers into a glass of water (which he says is pure, and he puts nothing into it), and has the patient drink it. This man is one of the State Rangers, and is stationed here for the purpose of putting down a mob that is said to exist in that county. It is said that he has treated several thousand cases in the last twelve months, and charges each patient \$1.00 for each treatment of rubbing his fingers over the clothing and drinking a glass of water that he has had his nasty fingers in. Of course, it's like all cases of this kind—there are hundreds of people who say that he can cure any disease, and that they have been cured by him, while I have seen many others who say he did them no good, and worse than robbed them of their money. The worst part of it is, people are coming from all parts of the State to be gulled out of their money by him. One poor fellow came all the way from Georgia to be treated by him for rheumatism in one of his legs, which had made a bad cripple of him; and after paying out many hard-earned dollars to this man Donelly (that is the Ranger's name), left just as he came, so I have been credibly informed.

I think we need officers here, and need them badly, but to put down such frauds as this, far worse than to put down any mob that has ever existed in this part of the State. What I want to know is this: Shall we who do not believe in such foolishness sit still and see such open robbery, without saying or doing a thing? or is there a law to put down such men as this? or is it possible for any one to have so much "magnetism" about him as to cure diseases on others by simply rubbing his hands over them? or is it all the patient's ignorance or imagination? The strangest part of it all is, the doctors in this town will say nothing against him or his manner of treating diseases. I am almost afraid to give my name, as I understand he threatens my sort by law for saying any thing against his way of treating diseases.

L. B. SMITH.

Lometa, Texas, June 9, 1898.

Friend S., I am exceedingly glad you have furnished us the above facts, for it points out at least one useful moral. If this man cures any diseases without *any* apparatus, then it is nothing strange that Electropoise cures when it has no virtue at all, and no electricity nor any thing else about it. It seems to me that such testimonials ought to open people's eyes. You need not be afraid at all to ventilate all such schemes. The man has no possible ground to prosecute you for reporting the facts as you have done, while you have an excellent chance to have him arrested for obtaining money under false pretenses, providing one—or, better, several—of his patients are willing to appear against him. We have recently had a very pleasant visit from Mr. Thomas Wm. Cowan, of London, England. In speaking to him about Electropoise and electric belts, and things of this sort, he told me of a man in England who opened a shop, and had his window filled with electric belts and other kindred appliances. Well, this man was arrested and sent to the penitentiary for obtaining money under false pretenses. The testimony of chemical, electrical, and medical experts was produced to show that the apparatus produced either no current at all, or not enough to have any perceptible effect on the disease. The physicians of your town probably have nothing to say in regard to the matter because they feel ashamed to think that such a fraud can be carried on right in a community where there are schools, books, and papers. I think these same physicians, however, would be willing to take the witness-stand (that is, if the man did not get out of sight before things got so far along) and testify that the whole proceeding was an abominable piece of fraud and superstition. The whole

operation is, in fact, a sad reflection on the intelligence and civilization of the present day. By all means report such things, and have them written up; and let community club together and drive the impostors and charlatans out of town and out of the land.

#### YELLOWSTONE PARK "AWHEEL."

I AM just now planning for a trip through the Yellowstone Park some time in July or August; and I was wondering whether there was not one or more bee-keepers, or those who felt acquainted with me through these pages, who would care to go along. I have had the trip in mind a good many years, and I had intended to make it alone, but you know that I am rather sociably inclined. Besides, there are several reasons why company would be desirable, for it is not "misery" alone that "loves company;" and when I am enjoying seeing those great geysers play one or two hundred feet high in the air, I should want somebody to talk to. Besides, you have to wait an hour or two, more or less, to see some of them "open up." It would be rather dull waiting if you didn't have *somebody* to talk to. Any one who feels inclined to join us can find out in regard to expenses by applying to his nearest station agent. I mention it now in order that we may have time to look the matter up, and decide when to go. As the region is rather elevated, the hottest part of our summer is generally the best time for the Park—say the latter part of July or early in August. I expect to ride my chainless Columbia. And, by the way, it has been ridden daily for about six weeks past, and I have never put a screw-driver or wrench to it anywhere, and have not oiled it once, and have not even pumped up the tires; and yet it is "a thing of beauty," and promises to be a "joy for"—a long spell. Now, wait a bit. You know what I said about drinking pure water and telling the truth. Well, although I have never pumped up the tires, Ernest has just informed me that he pumped them up once without my knowledge. He said he thought I was riding them rather too soft. At any rate, the wheel is a model of mechanical perfection. I never expect to ride a wheel (one of my own, at least) again that has a chain. No pants-guards are ever needed, and no chain lubricant. The gearing runs in oil. I can tell that the supply of oil has not given out, because, on a very hot day, it oozes out around the crank just enough to be visible. When they get the chainless wheels down to the price of the others, my impression is that chains will go out of fashion.

Now, then, who wants to go on that trip to Yellowstone Park? If we ride our wheels, there will be no stage fare to pay; but the hotels all charge \$4.00 a day. As I understand it, we can not very well get along without patronizing the hotels, unless, indeed, we should catch fish for dinner, and boil them in the hot springs, and camp outdoors in a blanket; and these very things are being done right along by some very good people.—



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